

anxaf
94-B
17344

JOURNAL
OF THE
ACADEMY OF NATURAL SCIENCES
OF
PHILADELPHIA

SECOND SERIES, VOLUME XVI.

PART 1

PHILADELPHIA:
PUBLISHED BY THE ACADEMY
1913

COMMITTEE ON PUBLICATION

HENRY SKINNER, M.D., Sc.D.

WITMER STONE, A.M., Sc.D.

HENRY A. PILSBRY, Sc.D.

WILLIAM J. FOX

EDWARD J. NOLAN, M.D.

Ex-Officio: HON. SAMUEL GIBSON DIXON, M.D., LL.D., *President*

EDITOR: EDWARD J. NOLAN, M.D.

WRITINGS OF ARCHEOLOGY.

BY CLARENCE B. MOORE.

- Certain Shell Heaps of the St. Johns River, Florida, hitherto unexplored. *The American Naturalist*, Nov., 1892, to Jan., 1894, inclusive. Five papers with illustrations in text, and maps.
- Certain Sand Mounds of the St. Johns River, Florida, Parts I and II. *Journal of the Academy of Natural Sciences of Philadelphia*, Philadelphia, 1894. Vol. X. Quarto, 130 and 123 pages. Frontispieces, maps, plates, illustrations in the text.
- Certain Sand Mounds of Duval County, Florida; Two Mounds on Murphy Island, Florida; Certain Sand Mounds of the Ocklawaha River, Florida. *Journ. Acad. Nat. Sci. of Phila.*, 1895. Vol. X. Quarto, 108 pages. Frontispiece, maps, plates, illustrations in text.
- Additional Mounds of Duval and of Clay Counties, Florida; Mound Investigation on the East Coast of Florida; Certain Florida Coast Mounds north of the St. Johns River. Privately printed, Philadelphia, 1896. Quarto, 30 pages. Map, plates, illustrations in text.
- Certain Aboriginal Mounds of the Georgia Coast. *Journ. Acad. Nat. Sci. of Phila.*, 1897. Vol. XI. Quarto, 144 pages. Frontispiece, map, plates, illustrations in text.
- Certain Aboriginal Mounds of the Coast of South Carolina; Certain Aboriginal Mounds of the Savannah River; Certain Aboriginal Mounds of the Altamaha River; Recent Acquisitions; A Cache of Pendent Ornaments. *Journ. Acad. Nat. Sci. of Phila.*, 1898. Vol. XI. Quarto, 48 pages. Frontispiece, maps, illustrations in text.
- Certain Aboriginal Remains of the Alabama River. *Journ. Acad. Nat. Sci. of Phila.*, 1899. Vol. XI. Quarto, 62 pages. Map, illustrations in text.
- Certain Antiquities of the Florida West-Coast. *Journ. Acad. Nat. Sci. of Phila.*, 1900. Vol. XI. Quarto, 46 pages. Maps, illustrations in text.
- Certain Aboriginal Remains of the Northwest Florida Coast, Part I; Certain Aboriginal Remains of the Tombigbee River. *Journ. Acad. Nat. Sci. of Phila.*, 1901. Vol. XI. Quarto, 100 pages. Maps, illustrations in text.
- Certain Aboriginal Remains of the Northwest Florida Coast, Part II. *Journ. Acad. Nat. Sci. of Phila.*, 1902. Vol. XII. Quarto, 235 pages. Maps, illustrations in text.
- Certain Aboriginal Mounds of the Central Florida West-Coast; Certain Aboriginal Mounds of the Apalachicola River. *Journ. Acad. Nat. Sci. of Phila.*, 1903. Vol. XII. Quarto, 136 pages. Maps, illustrations in text.
- Sheet-copper from the Mounds is not Necessarily of European Origin. *American Anthropologist*, Jan.-March, 1903. Plates in text.
- The So-called "Hoe-shaped Implement." *American Anthropologist*, July-Sept., 1903. Illustrations in text.
- Aboriginal Urn-burial in the United States. *American Anthropologist*, Oct.-Dec., 1904. Plate.
- A Form of Urn-burial on Mobile Bay. *American Anthropologist*, Jan.-March, 1905.
- Certain Aboriginal Remains of the Black Warrior River [Moundville]; Certain Aboriginal Remains of the Lower Tombigbee River; Certain Aboriginal Remains of Mobile Bay and Mississippi Sound; Miscellaneous Investigation in Florida. *Journ. Acad. Nat. Sci. of Phila.*, 1905. Vol. XIII. Quarto, 206 pages. Maps, illustrations in text.
- Moundville Revisited; Crystal River Revisited; Mounds of the Lower Chattahoochee and Lower Flint Rivers; Notes on the Ten Thousand Islands, Florida. *Journ. Acad. Nat. Sci. of Phila.*, 1907. Vol. XIII. Quarto, 144 pages. Maps, illustrations in text.
- Certain Mounds of Arkansas and of Mississippi (including Doctor Hrdlička's paper on the Crania). *Journ. Acad. Nat. Sci. of Phila.*, 1908. Vol. XIII. Quarto, 130 pages. Maps, illustrations in text, eight colored plates.
- Antiquities of the Ouachita Valley. *Journ. Acad. Nat. Sci. of Phila.*, 1909. Vol. XIV. Quarto, 170 pages. Maps, illustrations in text, eight colored plates. (In addition in this number is Doctor Hrdlička's paper on the skeletal remains.)
- Antiquities of the St. Francis, White, and Black Rivers. *Journ. Acad. Nat. Sci. of Phila.*, 1910. Vol. XIV. Quarto, 112 pages. Maps, illustrations in text, twenty colored plates.
- Some Aboriginal Sites on Mississippi River. *Journ. Acad. Nat. Sci. of Phila.*, 1911. Vol. XIV. Quarto, 116 pages. Map, illustrations in text, eight colored plates.
- Some Aboriginal Sites on Red River. *Journ. Acad. Nat. Sci. of Phila.*, 1912. Vol. XIV. Quarto, 163 pages. Map, plans, illustrations in text, eight colored plates.

Some Aboriginal Sites in Louisiana and in Arkansas

Atchafalaya River, Lake Larto, Tensas River, Bayou Maçon, Bayou D'Arbonne,
in Louisiana; Saline River, in Arkansas

BY

CLARENCE B. MOORE

A Report on a Collection of Crania and Bones from Sorrel Bayou, Iberville Parish, Louisiana

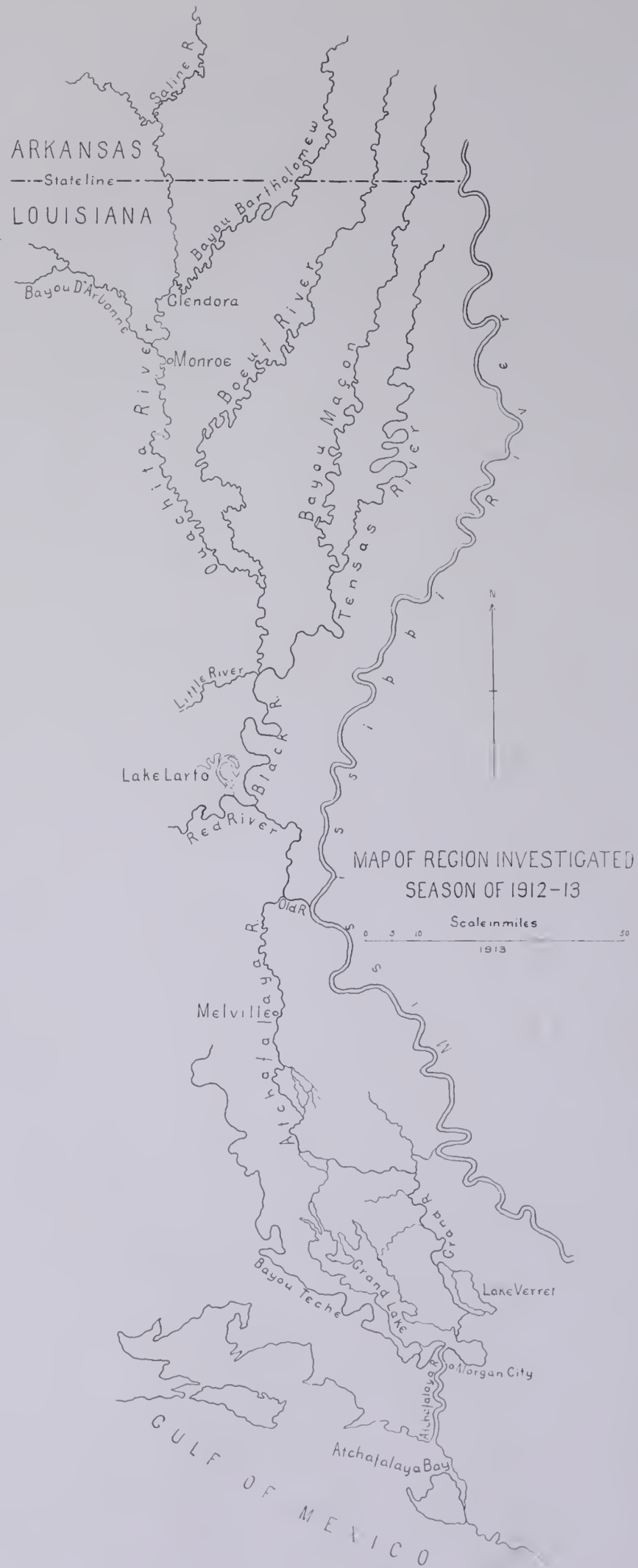
BY

DR. A. HRDLIČKA

Curator, Division of Physical Anthropology, United States National Museum

PHILADELPHIA

1913



SOME ABORIGINAL SITES IN LOUISIANA AND IN ARKANSAS.

(ATCHAFALAYA RIVER, LAKE LARTO, TENSAS RIVER, BAYOU MAÇON, BAYOU D'ARBONNE, IN LOUISIANA; SALINE RIVER, IN ARKANSAS.)

BY CLARENCE B. MOORE.

INTRODUCTION.

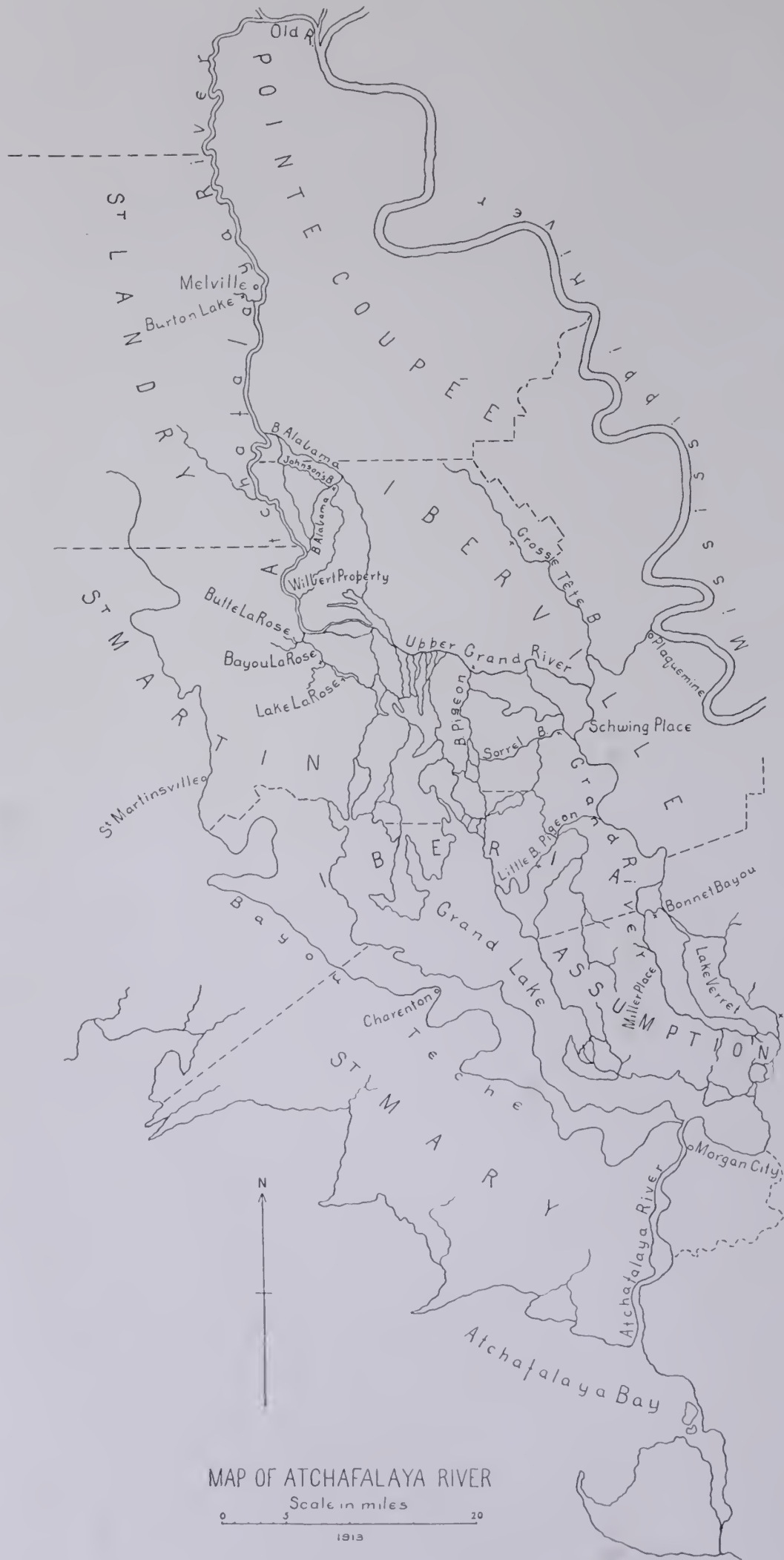
Our archæological investigation, this season, occupied parts of November and December, 1912, of January and April, 1913, and all February and March, 1913, one hundred and thirty days in all, and embraced portions of Atchafalaya river, of Lake Larto, of Tensas river, of Bayou Maçon, of Bayou D'Arbonne, all in the state of Louisiana, and a portion of Saline river, in the state of Arkansas.

The investigation of these regions, which hitherto, in the main, were unknown from an archæological point of view, proved rather an unproductive task. This result was not unexpected, as our agents, who had conducted a search in advance, had reported unfavorably on nearly all the various localities, and as, in addition, we fully realized that unsatisfactory conditions would, of necessity, be imposed upon us in this territory, most of which is subject to overflow, where the destruction or the impairment of mounds is not permissible. Nevertheless, these various localities seemed to call for investigation owing to their geographical relation to our former work.

As we have had occasion to explain in earlier reports, our investigation is accomplished by the use of a steamer of light draught as headquarters, in which men and material readily can be transported. The use of a steamer in this connection, however, is open to serious objection, since one's effort is limited to navigable water; but, on the other hand, a far greater amount of work can be accomplished in this way, and this is of vital importance since, in the United States, aboriginal remains are constantly being destroyed, and with deplorable speed, by treasure-seekers, relic-sellers, and by cultivation, while the number of those engaged in legitimate research in the field is very limited.

In order still further to facilitate the work, it is our invariable custom to have such territory as seems to offer opportunities for investigation, visited in advance, in order that, if a favorable decision as to its desirability is reached, the location of mounds and cemeteries may be determined and permission to investigate may be obtained.

The regions investigated by us this year had been carefully searched and reported on in part by Capt. J. S. Raybon, and partly by Capt. W. D. Platt, who, as a rule, with companions, visited all the localities in small boats in summer seasons, making careful inquiries as they went.



Both these gentlemen had been with us in some of our investigations and were fully conversant with the nature of our work. Captain Platt subsequently commanded our steamer throughout the season.

Dr. M. G. Miller, this season, accompanied the expedition as anatomist, as has been the case in all our previous archæological investigations, and has aided in putting this report through the press.

Mr. S. G. Weir was present as assistant for the third time and aided the expedition in various ways.

The thanks of the Academy are tendered: Dr. Aleš Hrdlička for his paper on the crania discovered by the expedition,¹ which appears at the end of this report; Prof. F. A. Lucas for determination as to bones of lower animals; Dr. H. A. Pilsbry for identification of shells; Mr. F. J. Keeley for determination of minerals and of rocks; Dr. H. F. Keller for chemical tests; Miss H. N. Wardle for aid with the index; and Mr. F. W. Hodge for literary revision of the report.

The Academy also warmly thanks all owners of properties who so courteously placed them at its disposal for investigation, and wishes to assure them that their kindness is most thoroughly appreciated.

All sites are described in order ascending streams or lakes, though the investigation was not always made in this way.

ATCHAFALAYA RIVER, LOUISIANA.

Atchafalaya river, in reality a continuation of Red river, leaves that stream eight miles² by water from where such waters of Red river as have not been diverted by the Atchafalaya, enter the Mississippi.

The Atchafalaya, after leaving Red river, follows a course southeasterly in the main, through the lower eastern part of that portion of the state of Louisiana that lies west of the Mississippi, and passing through part of the maze of lakes, bayous, and waterways found in that region, ultimately enters the Gulf of Mexico. In following this course, Atchafalaya river, at Butte La Rose, spreads into a swampy region intersected with bayous and lakes, and the name of the river temporarily is dropped, Upper Grand river and Grand river being usually considered as continuations of the Atchafalaya. The stream, however, comes together a few miles above Morgan City, and the name Atchafalaya is resumed, continuing on to the Gulf.

Atchafalaya river (under its various names) was searched in our behalf previous to our expedition by Capt. J. S. Raybon and a companion, from its junction with Red river to Morgan City, 148 miles by water.³ In addition,

¹ Only seventeen crania were discovered, this season, in a condition to preserve. Sixteen of these came from the mound on Sorrel Bayou, in the Atchafalaya region, Louisiana, and one from a mound on Saline river, Arkansas.

² These eight miles are given the name Old river on some maps.

³ All distances by water, of any importance, given in this report, are measured miles from United States Government maps.

10 ABORIGINAL SITES IN LOUISIANA AND IN ARKANSAS.

Captain Raybon's search included many lakes and bayous connected with the river. No investigation was made by him of that part of Atchafalaya river below Morgan City, which flows mainly through marsh.

Our own investigation included all the river traversed by Captain Raybon, with the exception of several collateral sites, whose omission will be explained later in our account.

The Atchafalaya region is low-lying in the main, and inhabitants in parts of it, from whom inquiries can be made, are few. Consequently numerous sites, no doubt, remain unlocated, though such as were found most likely were representative.

In this region burials in mounds were numerous, but the custom to inter artifacts with the dead apparently was not practised.

SITES INVESTIGATED.

- On the Miller Place, Assumption Parish.¹
- On Bonnet Bayou, Assumption Parish.
- On Little Pigeon Bayou, Iberia Parish.
- On Sorrel Bayou, Iberville Parish.
- Near the Schwing Place, Iberville Parish.
- Opposite Pigeon Bayou, Iberville Parish.
- On Lake La Rose, St. Martin Parish.
- On Bayou La Rose, St. Martin Parish.
- On the Wilbert property, Iberville Parish.
- On Bayou Grosse Tête, Iberville Parish.
- On Alabama Bayou, Iberville Parish.
- Near Melville, St. Landry Parish.

MOUNDS ON LAKE VERRET, ASSUMPTION PARISH.

At the lower end of Lake Verret are two mounds on property of Mr. Octave Delaune, reported by our agent who visited them, to be each about 6 feet in height and 60 and 40 feet in diameter, respectively.

Although permission had been obtained to investigate these mounds, an approaching flood made it inadvisable to do so.

MOUND ON THE MILLER PLACE, ASSUMPTION PARISH.

This mound, or ridge, more correctly speaking, borders Grand river, on property of Mr. C. P. Miller, who resides on it. The ridge, which has great irregularity of surface, is about 40 paces in width. Its length is hard to determine, as it extends some distance at one end almost at the level of the surrounding ground. Roughly speaking, it may be said to be 250 yards long. Its maximum height, measured from the outside, is 4 feet 8 inches, but a trial-hole put down at this place did not reach undisturbed clay until 7.5 feet had been penetrated.

¹ Such divisions of the commonwealth as are termed counties in other states of the union are known as parishes in the state of Louisiana.

As this ridge was under cultivation at the time of our visit, and as its position above the surrounding level made any considerable digging in it undesirable, in view of the oncoming flood (April, 1913), we were restricted in our research. Various trial-holes showed the ridge, so far as we could determine, to be differently composed. Presumably, when of much less extent, the ridge, made up of midden material, including many broken shells, mostly *Rangia cuneata* (a clam), had been enlarged by the addition of clay. Consequently one had to dig but a short distance down in what had been the original ridge to reach the midden debris, while where the slopes had been and quantities of clay had been added to bring them to a general level, it was necessary to dig for several feet through clay before reaching the midden debris of the original slope.

Over the surface of the ridge lay shells, mostly in fragments. According to Mr. Miller, the owner of the place, much of the ridge, until recently, had been covered with a mass of these shells, which, later, had been towed away in barges to pave the town of Franklin on Bayou Teehe. Mr. Miller said also that, when cultivating the ridge, many human bones had been plowed up, and in point of fact in all directions could be seen on the surface fragments of such bones. According to Mr. Miller, no artifacts had been found with the bones.

Several of our trial-holes came upon inconsiderable parts of skeletons, greatly scattered, which presumably were disturbances.

One trial-hole, that made in the highest part of the ridge, reached the upper surface of a burial at a depth of 14 inches. This burial was a deposit of bones, including one skull. In the same hole, 5.5 feet down, a skeleton of a young child was reached, with which was part of the skeleton of an adult, in anatomical order, of which the skull, and the bones of the arms and of the lower extremities below the knees, were missing.

On the surface of the ridge were found: various fragments of pottery, some marked with the imprint of a wooden stamp,¹ of a kind shown in Fig. 1; an



FIG. 1.—Fragments of earthenware with stamped decoration. (Full size)

¹ We forwarded a fragment selected from a number bearing this decoration, from this region, to Prof. William H. Holmes, who kindly writes of it as follows:

arrowhead of red flint, slightly more than .5 inch in length, being a flake worked on one side only. There was picked up also an object of earthenware belonging to a class shown in Plate II. These objects, hitherto unreported, were found by us in various sites in Louisiana and will be fully described later in this report.

MOUNDS ON BONNET BAYOU, ASSUMPTION PARISH.

About two miles up Bonnet bayou, on property of Mr. Gus Drews, of Morgan City, La., are three mounds about 200 yards in from the water.

The mound nearest the bayou, which, like the other two, has been plowed out of shape and greatly spread, is of tenacious clay and about 2 feet in height. As the mounds on this place were the reliance, in time of flood, of those owning cattle in that region, they were not accorded a thorough investigation; but several holes sunk into the one in question came upon a skeleton near the surface, so badly decayed that the exact form of burial was not determinable, though the skeleton seemed to have been closely flexed on the left side.

The remaining two mounds differed from the other in that they had been places of abode and contained a large proportion of midden material. They are known as "shell banks" in the neighborhood, though in reality they are far from being shell-heaps, containing as they do a small proportion of shells, mostly *Rangia cuneata*, with a few *Quadrula apiculata*, in such parts where shells are present at all.

The larger of the two "shell banks" was accorded an incomplete investigation, the holes indicating that the ridge, which had a maximum height of 4 feet where less plowing had been done than elsewhere, perhaps owing to the presence of trees, had increased in height in the main during a period of occupancy, as the material of which it was largely composed seemed to show. An addition, however, of clay had been made to the mound, presumably further to increase its height, probably after a time of unusually high water.

Scattered bones were found at several points in the mound, but only one burial was encountered. The superficial part of the mound above this burial consisted of a layer, 4 inches deep, of black loam with a mingling of shells. Presumably this layer had been much thicker at one time; in fact we were informed by the custodian of the property that all the mounds had been considerably higher in the past. Beneath the upper layer was a stratum of clay 14 inches deep, almost immediately under which lay the burial in black midden material which contained no shells, though it was noted that the corresponding layer in another part of the mound had a fair proportion of them. The burial, of the kind so

"The bit of pottery enclosed in your letter is the most westerly example yet found of the stamped ware which characterizes the south Appalachian region. The matrix is siliceous, and the pot has been built in the same way as the vessels from the states to the east of the Mississippi. The stamp used has been merely faced with a number of squarish teeth and has been applied as a paddle over the surface of the vessel."

This form of stamp has been fully described by Professor Holmes in his "Aboriginal Pottery of Eastern United States," pp. 78, 80, 20th Ann. Rep. Bur. Am. Ethn.

often found in this region, consisted of a layer of skeletal remains, including nine crania.

With these bones was a fractured humerus showing a fair union of the parts, all conditions considered. This specimen was sent as a gift to the Army Medical Museum, Washington, D. C., where a large collection of pathological specimens presented by us may be seen.

No artifact lay with the bones, although these people had pottery, as fragments marked with imprints of stamps were in the soil, and one part of a vessel was found having below the rim, five parallel, encircling, incised lines, each line, at intervals, having punctate markings.

On the surface of the mound was found part of a celt of igneous rock, having a flaring cutting edge and evidently having formed part of a graceful tool.

MOUND ON LITTLE PIGEON BAYOU, IBERIA PARISH.

On property belonging to Mr. Charles Forgy, of Berwick, La., on Little Pigeon bayou, is a mound in woods, about one-quarter mile SSW. from the landing. This mound, 5 feet in height and 75 feet across its circular base, was investigated by us to a limited extent only, as it was soon to be employed as a refuge in the approaching high water. It was, so nearly as we could determine, composed of raw clay and probably never had been a burial mound.

MOUND¹ ON SORREL BAYOU, IBERVILLE PARISH.

About a mile and a half along Sorrel bayou from its junction with Grand river is a mound in full view from the water, on property belonging to Messrs. A. Wilbert's Sons, of Plaquemine, La., whose large holdings of real estate in this region were most courteously placed by them at the disposal of the Academy for investigation.

The mound, most picturesquely situated, about 16 feet in height, is in the form of a truncated cone, with a diameter of 140 feet. It has been used extensively for burial purposes during the last seventy years and is covered with crosses and head-stones. Digging into it was deemed inadvisable.

In contact with and about surrounding the northern half of the mound (ENE. to WSW.) is a kind of platform with some irregularity of surface. The maximum height of this platform at the western end, where it is 100 feet broad (12 feet of which belongs to the slope), is 6 feet. From this end the platform slopes downward somewhat toward the eastern end, where it again ascends, reaching a height of 5.5 feet. At this end the platform is 145 feet across, 20 feet of which is slope.

Trial-holes sunk in this platform showed that it increased during aboriginal

¹ This mound is shown on the United States Government "Map of the Alluvial Valley of the Mississippi River, from the head of St. Francis Basin to the Gulf of Mexico." Published by the Mississippi River Commission. A most useful publication for those interested in this region.

occupancy, as it was composed largely of black soil containing ashes, charcoal, fragments of mussel-shells, remnants of fish-bones and of deer-bones, with occasional fragments of pottery. In the soil was found also a bone identified by Prof. F. A. Lucas as the penis-bone of an otter. Some of the holes were extended to the base of the platform, through this midden material without interval of any kind. On the other hand, in places, layers of clay, several inches in thickness, were present, locally, and perhaps had been placed in connection with burials, as these layers were sometimes found in the neighborhood of some of the skeletal remains; other burials, however, were without such strata.

The platform apparently was crowded with burials (nearly all our holes reaching them), and at all depths, some beginning one foot from the surface, while one in the high, western part of the platform was only 12 inches above undisturbed clay, which there was found 7.5 feet down.¹

It was impossible to define the limits of the grave-pits, which seemingly had been dug at different stages in the growth of the platform, as the material of which the platform was made was nearly uniform in color, and the clay layers, when present, did not entirely cover the burials as a rule. These burials, which, with two exceptions, were great deposits of bones mingled and spread and of course out of anatomical order, sometimes connected on the same level, or, at times, layers of bones somewhat below others were dug into when soil was being thrown out to facilitate the removal of upper deposits.

Burial No. 1 was the skeleton of an adult, at full length on the back.

Burial No. 2, adult, lay closely flexed on the left side, the upper part of the skeleton being more than 3 feet from the surface. The skull and some of the other bones of this skeleton were saved.

The remaining burials, for reasons aforesaid, were not separately enumerated. The bones belonging to them included two hundred and sixty-eight skulls, two being of adolescents and five of children. Sixteen crania that were in condition to preserve, including the skull belonging to the single burial referred to, were sent as a gift to the United States National Museum and are described by Dr. Aleš Hrdlička in a paper at the close of this report.

At least two of the skulls from this place, when unearthed, were filled with clay very light in shade and entirely differing from the soil in which they were found. This fact indicates a reburial, strong evidence of which we found also in the Mayes Mound at Lake Larto, which is described in this report.

We know that reburial was practised to some extent, at least, throughout this region. Of the Chitimacha,² who lived in various villages throughout this part of Louisiana, we are told:³ "One year after the death of a head chief, or of

¹ Probably our measurement of the height of the platform was taken from made-ground about 1.5 foot above undisturbed clay.

² John R. Swanton, "Indian Tribes of the Lower Mississippi Valley and Adjacent Coast of the Gulf of Mexico," p. 337, *et seq.*, Bureau of American Ethnology, Bulletin 43

³ *Ibid.*, p. 350, quoting Gatschet.

any of the village war chiefs, of whom there were four or five, their bones were dug up by a certain class of ministrants called 'turkey-buzzard men' (*ōsh hā' tch'na*) the remaining flesh separated, the bones wrapped in a new and checkered mat and brought to that lodge. . . . After which the bones were placed in a mound. . . . The burial of the common people was effected in the same way, one year after death; but the inhumation of the bones took place at the village where they had died."

No artifact of any kind was found in association with the burials. In the midden débris were: four implements of bone, each having the articular part remaining at one end; several broken bone implements; three of those objects of clay to which reference has been made and of which full description will be given later; and a rude knife of chert.

The fragments of pottery from this place are of good, hard ware, sometimes fairly thin, and indicate vessels presenting a variety of shapes and decoration of average excellence. One fragment shows uniform decoration with red pigment, and a number of others bear imprints made apparently by the aid of a stamp.

MOUND NEAR THE SCHWING PLACE, IBERVILLE PARISH.

At the Schwing Place, on Grand river, said to belong to Messrs. Wilbert's Sons, of Plaquemine, La., are remains of a railroad extending inland. Following this road for about one mile and then entering woods on the south side of the track, a distance of about 200 feet, one reaches a mound between 4 and 5 feet in height and about 75 feet in diameter.

Eleven trial-holes showed the mound to be variously composed, some of the holes reaching clay of a light shade, comparatively well up in the mound, others going through black soil, evidently midden material, down to what seemed to be the base.

The more central trial-holes came upon six burials, as follows: two bunched burials, each with one skull; a burial at full length, too much decayed to determine if originally it had lain on the back or prone; the skeleton of a child; the skull and the upper half of the trunk of an adult skeleton, the rest missing through some cause that was not apparent; a skeleton at full length on the back.

The full-length skeleton described as badly decayed lay with six inches of earth above it. Three inches below the skull, or about 15 inches down, was a deposit of objects of earthenware, thirty-two in fairly good condition and a number of imperfect ones and fragments. The deposit was not heaped, but was spread at the same level. These objects are of the kind referred to before in this report, and belong to the type of artifacts found in great numbers at Poverty Point, on Bayou Maçon, La., examples of which are shown in Plate II, and which will be fully described in connection with the Poverty Point site. The objects from that place have various shapes, but those under description from the Schwing Place mound belong, such as are whole, to two classes, one having the

shape of two cones placed base to base, and the other, also a double cone but with four longitudinal furrows. Examples of these are shown in Fig. 2.



FIG. 2.—Objects of earthenware. Schwing Place. (Full size.)

All these objects from this place, even the fragments, were coated with what Doctor Keller has determined to be clay, sand, and fine particles of carbon—ash material. In other words, these objects had lain in a fireplace, though there was no sign of a former fire where they were found.

Throughout the mound, and evidently midden-débris, were various fragments of pottery, some of fairly good quality, several having simple designs composed of incised lines, and one showing traces of red paint.

Apart from bones was a flint arrowpoint or lancehead about 3 inches in length, one barb of which is missing.

MOUND OPPOSITE PIGEON BAYOU, IBERVILLE PARISH.

Entering woods opposite Pigeon Bayou, belonging to Messrs. A. Wilbert's Sons, of Plaquemine, La., and keeping a NNE. direction for about 200 yards from the water, one comes to a mound which was visited by our agents at a time when the Atchafalaya river was fairly low. This mound, at that time, was reported to be 100 feet in diameter and 4 feet in height. It was possible for us, later, owing to high water, to reach this mound only by boat, but as most of it was under water, no investigation could be attempted.

MOUNDS ON LAKE LA ROSE, ST. MARTIN PARISH.

On the bank of Lake La Rose, within sight of one another when not obscured by foliage, are three mounds on property of Mr. Robert Martin, of St. Martinville, La.

The mound nearest the water and in full view from it has been quadrangular, and probably square, but has been greatly washed and worn. We were told that on its summit-plateau, now 24 feet by 48 feet in extent, forty persons had

lived for four months during the great flood of 1912. The plateau, it was said, then was larger than at present, but had worn away under this prolonged and congested occupancy. In height the mound slightly exceeds 11 feet; its diameter of base is about 95 feet each way.

It was evident the mound had been occupied for a considerable period in aboriginal times, and that graves had been dug into it, probably from the surface, and filled with a black, superficial soil differing in color from the clay of which the mound had been made. Presumably, however, the dark surface soil had been mostly worn away from the mound, as it was present only in graves, of which five were encountered. Four of these graves held scattered fragments of bones, probably disturbances, all about one foot from the surface. One burial, 16 inches down, was of the bunched variety, with one skull.

In view of the reliance placed on this mound as a place of retreat by those living near it, and that the rising water was not far from its base at the time of our visit, we did not feel justified in undertaking more extensive digging into it.

In a SSW. direction from the quadrangular mound is another in the form of a truncated cone, 8 feet in height and about 90 feet in diameter. This mound had dark soil extending more than two feet down in places, but considerable digging failed to discover burials.

In the dark soil was found a graceful bead of granite, tubular in the main, but expanding slightly at the center; it measures somewhat more than one and one-half inch in length and one-half inch in maximum diameter.

This mound is promising in appearance, and under different conditions a large central excavation would have been sunk to its base.

The third mound, an insignificant affair, is composed of tough clay. A very brief investigation was accorded it.

MOUNDS ON BAYOU LA ROSE, ST. MARTIN PARISH.

About 200 yards from the bank of Bayou La Rose is a mound 7 feet in height and about 95 feet in diameter of base. This mound, in woodland belonging to Mr. J. S. Martin, of St. Martinville, La., was surrounded by water at the time of our visit, and no digging into it was attempted. Near it was a small mound in part covered by water, which also was left untouched.

MOUND ON THE WILBERT PROPERTY, IBERVILLE PARISH.

About 100 yards in from the east bank of Atchafalaya river, in woodland belonging to Messrs. A. Wilbert's Sons, of Plaquemine, is a mound about circular in basal outline and 60 feet in diameter. The height is from 18 inches to 2 feet. The mound proved to be a mass of roots and tough clay and yielded no return.

MOUNDS ON BAYOU GROSSE TÊTE, IBERVILLE PARISH.

On Grosse Tête bayou, on property of the L. O. Landry Co., of Grosse Tête, La., are two mounds which were visited by our agent, one reported to be

18 ABORIGINAL SITES IN LOUISIANA AND IN ARKANSAS.

10 feet in height and about 70 feet in diameter; the other about half that size. Though these mounds were placed at our disposal for investigation, the high water prevailing at the time we reached their vicinity was such that digging into them was deemed inadvisable.

MOUND ON ALABAMA BAYOU, IBERVILLE PARISH.

In open woods, probably a comparatively recent growth, as the place seemed to have been under cultivation, opposite the mouth of Johnson's bayou, about 200 feet in from the water, is a mound, the name of whose owner we did not learn. This mound, with a base irregularly circular, 60 feet in diameter, is about 4.5 feet in height. It has been used as a refuge for hogs, and the sides are considerably worn. The mound proved to be of tough clay with no sign of interments.

Seventy paces in a southerly direction from this mound is another about 2 feet in height and 50 feet in diameter. In the center of the mound is a water-oak, a tree of no great age, 18 feet in circumference 5 feet from the ground. The roots of this tree made investigation practically impossible.

MOUNDS NEAR CROSS BAYOU LANDING, POINTE COUPÉE PARISH.

About two miles below Melville, but on the opposite, or eastern, side of the river, a mound was visited by our agent who reported it to be about 5 feet in height and 50 feet in diameter of base. As the owner of the mound seemed to consider that the privilege of digging into it should be richly paid for, the question of its investigation was dropped.

MOUNDS NEAR MELVILLE, ST. LANDRY PARISH.

About two miles in a southerly direction from Melville, if a straight line were followed, but somewhat more by the way it is necessary to take, is the property of Mr. E. B. Dubuisson, of Opelousas, La., on the southern bank of Burton lake, which is probably a small bayou across the mouth of which a levee has been built.

In a cultivated field on this property, but a short distance apart, are a ridge and a mound.

The ridge, which evidently has been plowed down to a great extent, is 160 feet in length. At the western and wider end it is 85 feet across. From this end, where its height is about 4 feet, it slopes gradually downward. No trace of interments was found in this ridge.

The mound, which has been quadrangular, is considerably worn and probably parts of the sides have been under cultivation. Its height is about 8.5 feet. Its basal diameters are 110 feet and 125 feet. There is dark soil on the summit-plateau, which is 45 feet by 50 feet, but hard, red clay is soon reached in digging. We found no sign of burial in this mound, but a thorough examination

was not accorded it, as the water was rising rapidly at the time of our visit and the mound was likely soon to be required as a refuge for stock.

There is no history of the discovery of aboriginal relics at this place. A few small bits of undecorated pottery were seen by us at the base of the mound, and a delicate, barbed arrowhead of flint was picked up on it.

Bayou Teeche, to the westward of the Atchafalaya region, this season was visited by us without advance search, and inquiries were made as to the existence of mounds, almost to St. Martinville, the head of navigation, 85 miles from Morgan City, following the course of the stream.

The banks of this bayou were under cultivation or occupied by towns or mills without interruption so far as visited by us, and the region evidently has been thickly inhabited for too long a time to offer archaeological returns of much interest.

Several mounds were reported to us as being in the back country and probably under water at the time (April, 1913). Another mound, visited by us, had been almost plowed away.

At Moro plantation, St. Mary Parish, belonging to Mr. Oscar Zenor of Calumet, La., are two mounds near together and in full view from the water.

The mound nearer the bayou, 13 feet in height and about 100 feet in diameter of base, had been dug into somewhat previous to our visit, and one side had been removed, perhaps by wash, leaving so steep a section that it was possible to fall from the summit to the base on that side.

Although this mound was connected with a shell ridge on the eastern side, formed almost entirely of a variety of clam-shell, *Rangia cuneata*, and midden deposit extending along the bank of the river, such excavations as were made by us in the mound showed only scattering shells, and no mass of shells was apparent at the section where the interior of the mound was laid bare.

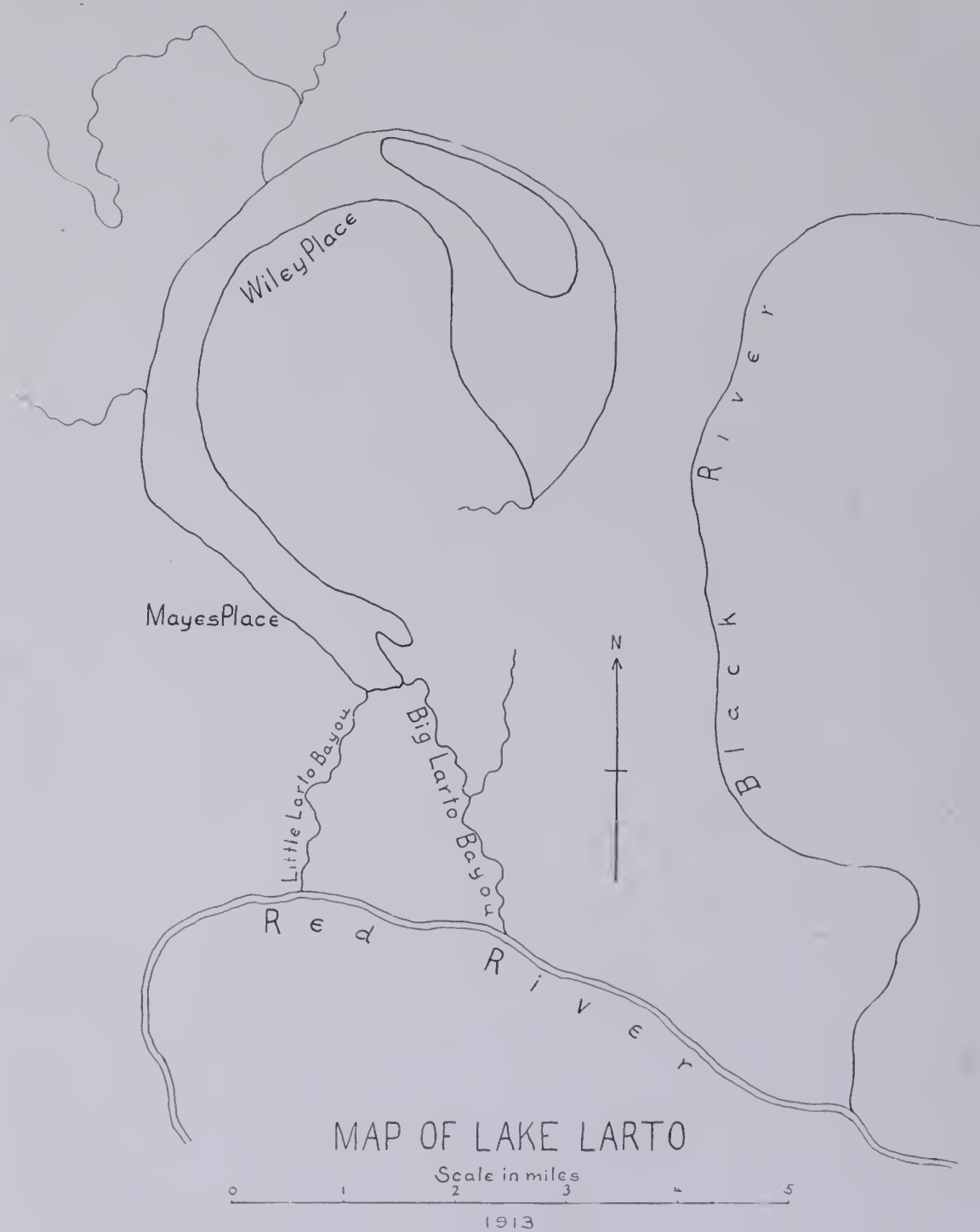
Apparently the mound was made of tough clay. But one skeleton was found; this lay 16 inches below the surface, extended face downward. A previous excavation had cut away the skull and the right side of the thorax.

The second mound, 10.5 feet high and about 110 feet in basal diameter, had been under cultivation and great furrows remained on its surface, though it was overgrown with underbrush and grass at the time of our visit.

This mound, so far as excavated by us, was of hard clay without sign of burials.

Immediately across the bayou from Charenton is the home of Mr. F. C. Viguere. One mile across country from this gentleman's residence, in St. Mary parish, near the border of Grand lake, are five mounds composed largely of shell, and various shell ridges.

These mounds, with one exception, were covered with growing sugar-cane, so that our investigation was restricted to this one, which was 7 feet high and about 125 feet in diameter.



It had grown up under aboriginal occupancy and was composed largely of shells, *Rangia cuneata*, a clam very abundant in this region. No burials were found in it, though human bones are said to have been plowed up from some of the other mounds at this place.

In midden débris was a sherd of inferior ware, on which was red pigment.

At Loreauville, Iberia parish, are two mounds a short distance apart, both in sight from the water, each about 5 feet in height and 80 feet in diameter, approximately. Human bones in fragments were visible upon one, and both mounds had an inviting appearance, but multiplicity of owners and of heirs living at a distance made investigation impossible.

LAKE LARTO, LOUISIANA.

Lake Larto, in Catahoula Parish, La., has long been famous locally for the discovery of aboriginal relics.

The lake, somewhat resembling a horseshoe in shape, is about ten miles in length. It is comparatively narrow, but less so at the head of the lake, near which is an island of considerable size.

Lake Larto is connected by bayous with Catahoula lake, Little river, Black river, and Red river, Big Larto bayou, its main outlet, joining Red river about forty miles by water from Mississippi river. The lake has Little river to the north, Black river nearby, to the east, and Red river to the south. To the west is a region bounded by Red river, and directly east, beyond Black river, is the Mississippi. Such parts of all these rivers as are near or comparatively near Lake Larto have been investigated by us without results of especial interest.

Captain J. S. Raybon and a companion searched the lake in our behalf previous to our coming.

MAYES MOUNDS, CATAHOULA PARISH.

About one mile along the western shore of Lake Larto from its union with Big Larto bayou is open woodland, forming part of a property belonging to Miss Josie S. Mayes, of Harrisonburg, La. One-quarter mile in from the landing, approximately, on this property, are two mounds, the one nearer the water being irregularly circular in outline with a basal diameter of 165 feet. The height of the central part of the mound is about 5 feet, though it was doubtless somewhat higher at one time, as indicated by the superficial position of some of the burials in it. Though a few trees are upon the mound at present, it has evidently been under cultivation in the past, and the dark superficial soil, which no doubt covered it to some depth at one time, has now disappeared in places.

The mound, with pens and a shed upon it, is a refuge for cattle and hogs in periods of high water, therefore an investigation impairing its usefulness was not to be thought of; nevertheless, we were able to put down very many trial-holes in all parts of it, greatly enlarging them in some instances, and after most

careful filling, to leave the mound in almost its normal condition. The Academy feels greatly indebted to Miss Mayes for full permission to make an investigation on her property.

Fortunately the composition of this interesting mound is of a nature to facilitate exact conclusions. It was composed of homogeneous, light-brown clay, and a mixture of this clay and black soil from the surface filled the pits, all of which evidently had been dug from the surface at a time when the deposit of black midden-soil thereon was greater than it was at the time of our investigation. Hence delimitation of the graves was a matter of comparative ease.

The aboriginal burials (there were some comparatively recent ones which we did not permanently disturb) seemed to have been placed in the eastern portion of the central part of the mound.

The pits contained accumulations of skeletal remains, but were not filled with them; nor were the bones in one mass, they having been placed here and there in different parts of the grave (some always on the base of it) as if, after a deposit, partial filling had taken place and then other deposits had been made and covered. These deposits, the bones of which were all very badly decayed, were made up sometimes of the bones of one individual apparently, sometimes of a number.

As the burials in this mound present features of considerable interest, they will be described in detail.

Burial No. 1. This pit, roughly circular, 8 feet by 9 feet and 4.5 feet in depth, contained deposits of bones beginning 18 inches below the surface, among which were sixteen crania. At times, long-bones slanting upward rested along the sides of the pit, as was the case in other burials in this mound.

Together with skeletal remains lying on the base of the pit were: powdered hematite (red pigment); two masses of kaolin (white pigment) each about the size of a fist; a lump of yellow ochre, also a pigment. With these was a flat pebble of flint.

Near these paints was a bicave of fine-grained sandstone, 2.25 inches in diameter; and on another part of the base of the pit, with bones, lay a fine effigy-pipe of earthenware, 4.3 inches in length and 3.5 inches in maximum height. This interesting pipe (for large effigy-pipes of earthenware are of great rarity, effigy-pipes of considerable size usually being of stone) represents a frog, and is shown in three positions in Plate I and in section in Fig. 3. It has had a uniform coating of red pigment, now worn away in places. The pipe has seen considerable use, as the interior of the bowl, well blackened by fire, clearly shows.

Apart from the burials, in the soil in this grave, were the base of an earthenware vessel and part of a base with some of the side of another vessel. In one base is a perforation of considerable size; and it is evident, from part of it remaining, there has also been one in another base. These perforations had been made at the time when the vessel was in process of modeling, previous to the firing of the clay. We have here a very interesting feature, namely, the



MAYES MOUND, EFFIGY-PIPE OF EARTHENWARE. (FULL SIZE)

ceremonial "killing" of vessels, in a region where it was seldom practised. This "killing," as the reader probably is aware, was done to free the "soul" of the vessel that it might accompany the spirit of the owner on his journey. This custom was practised chiefly by aborigines of Florida and southern Arizona, sometimes by knocking a hole in the bottom of a vessel, sometimes by cutting a hole in it, after the completion of the vessel. Ceremonial vessels in Florida also were often made for mortuary rites, with a hole moulded in the base during the process of manufacture, similar to some of those present in this mound, and some vessels even had additional openings made in the body.¹

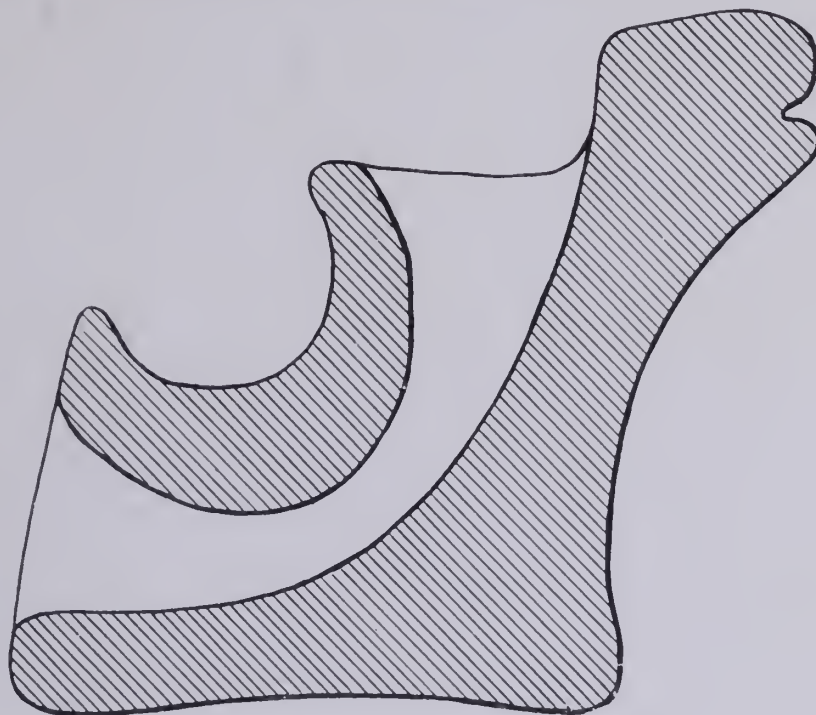


FIG. 3.—Pipe. Vertical section. (Full size.)

Burial No. 2. This pit, an irregular ellipse, 10.5 feet by 7.25 feet and only 2 feet in depth, contained skeletal deposits including thirty-three skulls.

Near a skull was a bicaue ear-plug of hard earthenware, 1.3 inch in diameter, flaring on what was no doubt the side presented in front when the ornament was in use. Both faces bear a black polish now somewhat impaired. The circumference is comparatively rough. Presumably the remaining ear-plug had fallen from the skull before burial, or possibly had been lost in the process of reburial, which probably had been practised in this mound, to which custom we shall have occasion to refer later in connection with this place.

Lying above a group of six skulls was a bowl of earthenware, unbroken and

¹ The fullest details as to the "killing" of vessels are given in our reports on the archaeology of Florida and of nearby regions.

without basal perforation, 7.75 inches in diameter, bearing no incised decoration, but having an encircling depression below the rim. The ware, which is inferior, is tempered with gravel or with small bits of pottery.

In the neighborhood of skeletal remains was a small celt, having the edge entirely chipped away, and part of another.

Burial No. 3. This burial was a skeleton at full length, 16 inches from the surface, so badly decayed that it was traceable by small fragments only.

Burial No. 4. This pit was oblong, with rounded corners, and measured 8 feet by 5 feet 9 inches by 4 feet 8 inches deep. Interments were encountered 7 inches from the surface and continued down at intervals in the way already described. The skeletal remains included sixty-six skulls. With the bones, in places, were numerous fragments of bones showing marks of fire, but not calcined.

Unless objects of a perishable nature were placed with the burials in this pit, the aborigines presumably considered their duty to the dead fulfilled when they had deposited with them: part of a very rude knife of flint; a little powdered hematite at one place on the base; probably a rattle, of which but a group of small pebbles remained; a pot of earthenware, having by way of decoration a series of encircling, parallel, incised lines below the rim. This vessel was so badly crushed that determination as to the presence of a basal perforation was impossible.

Burial No. 5. An elliptical pit, only 14 inches deep at the time of our investigation, and 7.5 feet by 5 feet in extent. Human bones, including twelve skulls, appeared immediately under the surface and continued to the base. It may be well to explain that the skulls in this mound were so badly decayed that they were invariably crushed and that some were represented by fragments only. A fireplace lay beneath part of this pit, but the bones showed no effect of heat and the presence of the fireplace perhaps was adventitious.

No artifacts accompanied the remains in this grave.

Burial No. 6. An oblong pit 6 feet 10 inches by 4 feet by 2.5 feet deep, with a small offset at one side. Human remains, including twenty-three skulls, extended down from 3 inches below the surface. With the remains were an undecorated pipe of hard earthenware, shown in Fig. 4, and in section in Fig. 5, and part of a somewhat similar one. There was present also a small vessel, in fragments (as were all the vessels from this mound with the exception of one already described), having in the base a mortuary perforation made before the firing of the clay. Also with bones was a lump of pigment tending toward purple in shade, especially when damp, similar to that found by us in the mound on the Haley Place,¹ on Red river, southwestern Arkansas. It has been determined that pigment of this kind is ordinary red hematite that has been subjected to heat. Presumably the aborigines were acquainted with the method of manu-

¹ "Some Aboriginal Sites on Red River," pp. 531 and 548. *Journ. Acad. Nat. Sci. of Phila.*, Vol. XIV.

facture of this pigment and that its occurrence is not owing to accidental contact with fire.

Burials Nos. 7, 10, 11, respectively 7 inches, 6 inches, 1 foot from the surface, were interments of adults extended on the back. No artifacts were in association.

Burial No. 8. This grave-pit, which included in its contents twenty-one skulls, was oblong, 8 feet by 4 feet by 3 feet deep. Bones were first encountered 6 inches from the surface. With the remains was a small bowl bearing rude,



FIG. 4.—Pipe of earthenware. Mayes mound.
(Full size.)

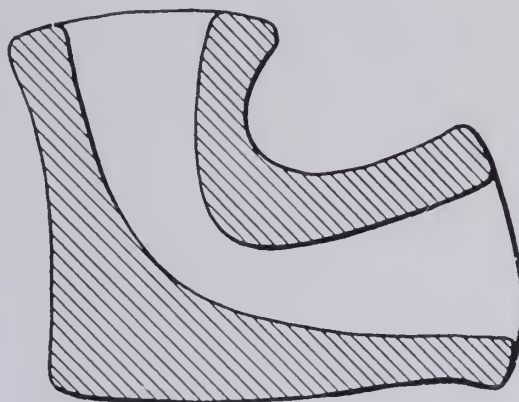


FIG. 5.—Pipe. Vertical section. (Full size.)

incised, scroll decoration. The base of this bowl was not present with the other parts recovered by us, and presumably had been knocked out ceremonially. Another small bowl was found having rude, lined decoration and so badly broken that determination as to a basal hole was not possible.

A part of a large earthenware pipe from this pit, consisting of most of that portion made for the reception of the stem, bears on each of two opposite sides, two concentric circles surrounding a dot. Around the orifice for the stem is a deeply incised circle, and the beginning of other decoration, also incised, is on the top of the fragment.

There were also found separately in the pit, a small bicave of coarse sandstone, and an arrowhead, or knife, of flint, having but one shoulder, a peculiarity already on record¹ as occurring on some flint points from this (Catahoula) parish.

Burial No. 9. Oblong, with rounded corners, 7.5 feet in length, the two ends being respectively 3 feet and 3 feet 8 inches across. The grave was 1 foot 8 inches in depth, and bones, including seven skulls, lay within four inches of the surface. In association with the interments was a lump of yellow ochre in a deposit consisting of a rude lancehead of quartzite, slightly more than 5 inches in length; two lanceheads of flint, each about 3 inches long; and a lancepoint or arrowhead, also of flint, having a length of 2.5 inches.

¹ Gerard Fowke, "Stone Art." Thirteenth An. Rep. Bur. Am. Ethn., p. 156, fig. 218.

Burial No. 12. This pit was 8 feet long by 4 feet wide and had at the southern end an offset 30 inches wide and 2 feet in depth. The depth of the grave was 4 feet, and human remains, including forty-nine crania, were present from 10 inches below the surface, extending at intervals to the base.

Near the surface was a small pot with rude line-decoration and having a hole broken through the base. Two pebbles lay near a skull, and in the vicinity of another was a sandstone lancehead, 4 inches in length, having marginal notches on both sides of the blade. This lancehead can hardly have been intended for any practical purpose.

Burial No. 13. This pit, in the form of an irregular ellipse,

was 9 feet by 5 feet 2 inches, and 2.5 feet deep. Skeletal remains, among which were twenty-five crania, were found, some within 3 inches of the surface.

This grave yielded: a quartz pebble slightly biconvex, which had the margin, originally roughly circular, additionally rounded; an earthenware vessel with a hole in the bottom, made previous to the firing; part of another vessel which had been similarly treated.

Almost on the base, with bones on all sides, were two pipes immediately together. One of these is of earthenware, biconical, with scant line-decoration. The other, of sandstone, is 3 inches in height and has a maximum diameter of 3.2 inches. The decoration, which is incised, consists mainly of series of crescentic lines. This pipe is shown in Figs. 6, 7 and in section in Fig. 8.



FIG. 6.—Pipe of sandstone. Mayes mound. (Full size.)



FIG. 7.—Pipe of sandstone. Mayes mound. (Full size.)

Burials Nos. 14 and 18. Pit No. 14, 8 feet by 2 feet 8 inches, and 2 feet 4 inches deep, was contiguous to Pit No. 18, which was 6 feet 3 inches by 6 feet 10 inches, and 3 feet deep. When these graves were first discovered they were supposed to be a single grave and burials from both of them were noted as belonging to one pit. Later, when it was found that there were two graves in actual contact without division for a distance of at least 4 feet, it was then too late to determine which burials scored had belonged to each grave, and consequently all from both graves are noted together.

Human bones were first encountered 10 inches from the surface. With them were forty-one crania.

Mortuary deposits in this grave were as follows: an earthenware vessel having a hole in the base, made after the firing of the clay; another vessel with the bottom ceremonially broken out; a small undecorated bowl having a hole broken through the base; a lump of yellow ochre.

Burial No. 15. A pit 10 feet 5 inches long and 5 feet 9 inches across each of its rounded ends, and 3 feet 2 inches in depth. Skeletal remains were within one foot from the surface and included eighteen skulls.

Artifacts with the remains were: a flint pebble about the size of a fist; another considerably smaller; a pottery vessel through the base of which had been a ceremonial hole, but whether made before or after the firing of the clay we were unable to decide, owing to the condition of the ware.

Burial No. 16. This pit, circular, so nearly as we could determine, was 34 inches in diameter and 13 inches deep. It contained fragments of badly-decayed bones on its base, but if any cranium had been present its parts were not in a condition to identify.

Burial No. 17. This grave, oblong with rounded ends, 8 feet 5 inches by 4 feet 7 inches, and 1 foot 9 inches deep, contained human remains with eight skulls, extending to within six inches of the surface. There were no associated artifacts.

Burial No. 18 has been described in connection with Burial No. 14.

Burial No. 19, a long and narrow grave, 8 feet in length, 2 feet 9 inches across at the middle and 2 feet wide at each end. The depth was 2 feet 3 inches. This grave, which held four skulls with other skeletal remains, the bones being within 8 inches of the surface in places, had been somewhat longer than the measurement given, but had been cut across at one end by Burial No. 18.

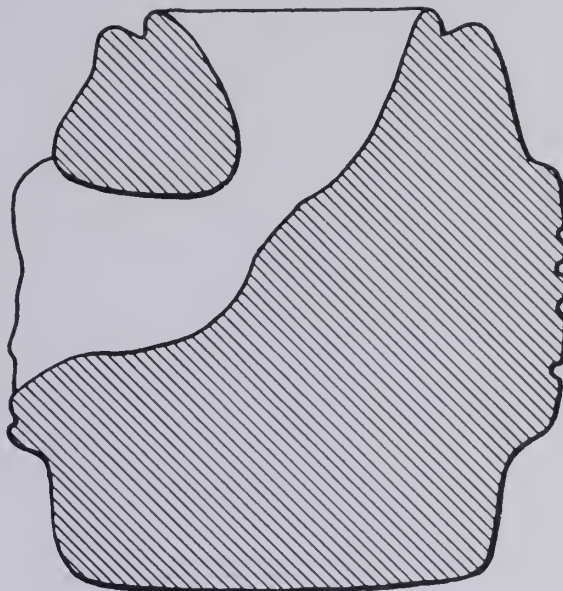


FIG. 8.—Pipe. Vertical section. (Full size.)

Burial No. 20. This grave-pit, which was 8 feet long, 6 feet across at the middle and about 5 feet 8 inches at each end, had a depth of 2 feet 3 inches, the sides sloping inward somewhat toward the bottom, as was the case with all the graves in this mound. Skeletal remains, among which were twelve crania, were within 8 inches of the surface.

The only artifact, if such it may be called, coming from this large grave, was a flat pebble with some evidence of wear on parts of the margin.



FIG. 9.—Vessel of earthenware. Mayes mound. (Full size.)

Burial No. 21. A grave 4 feet 2 inches in depth, elliptical in outline, having a length of 7 feet 9 inches and a maximum width of 4 feet 3 inches. The bones, which included six skulls, were found comparatively deep, none being nearer than 21 inches from the surface. With the remains was no artifact whatever, but well up toward the mouth of the grave, as if to do duty for all below it, a vessel had been placed. This vessel, undecorated but of graceful shape, has a ceremonial hole knocked through the bottom.

Burial No. 22. This grave was perplexing. It was irregularly oblong, 7 feet long with ends 3 feet 9 inches and 3 feet 4 inches, respectively. Its depth was 3 feet 4 inches. Only two skulls were discovered in the pit, accompanied by a limited amount of minute fragments of other bones, some within 8 inches of the surface. It seemed unlikely that the aborigines would make a grave of such large size for so limited an interment. The grave was filled with roots of a large



FIG. 10.—Vessel of earthenware. Mayes mound. (Height 5.1 inches.)

tree, growing nearby, and it is barely possible that many of the bones were absorbed by them.

From this pit came an undecorated, biconical pipe of earthenware, from which a small part of the bowl had been broken before its inhumation.

This pit apparently had cut through a narrow and shallow grave in which were a skull and other bones that may have been a burial at length.

A few inches distant from the larger grave, but clearly separated by the yellow clay, was a small, shallow pit filled with dark soil, in which, however, no bones were found.

Burial No. 23. This grave, oblong with rounded corners, 8 feet by 3.5 feet by 1 foot 10 inches deep, contained bones, including thirty skulls, which reached to within 8 inches of the surface in places.

Part of a pot having a basal perforation made before the firing of the vessel was the only artifact accompanying the numerous deposits of bones.

No bones of children were discovered in this mound, and if any had been placed in the graves explored by us—and it seems likely that such was the case—all trace of them had disappeared.

An interesting point in connection with this mound is that none of the four single burials of skeletons from it had any artifact in association.

As a general rule one expects to discover, and generally does discover, more artifacts placed with single skeletons than with burials of the bunched variety. The reason for this presumably is that entire skeletons probably are of individuals dead a shorter time at the period of interment than were those

to whom the disconnected bones belonged, whose ligaments no longer held them together, and consequently the affection of those related to the individual burials had been allowed less time to abate.

In this mound, as in the one at Sorrel bayou, in the Atchafalaya region, already described in this report, reburial of bones evidently had taken place, as a number of skulls were found filled with clay differing entirely in shade from that present in the mound. It is true that Lake Larto is somewhat north of the country of the Chitimachas, by whom it is recorded reburial was practised; nevertheless it is clear the custom was not confined to that region.

The pottery from this place, though not of more than medium quality, shows evidence of considerable care in finish in some instances, and, as a rule, is graceful in form.

One piece bears a high polish, and in this connection it is interesting to note that the pebbles found in this mound had the appearance of having served as smoothing stones. The decoration of the ware is incised and punctate as a rule, a favorite design being a series of incised, encircling, parallel lines below the rim.



FIG. 11.—Vessel of earthenware. Mayes mound.
(Height 4.9 inches.)

The most interesting feature connected with the pottery from this mound is the presence in the vessels, almost without exception, of the ceremonial, basal perforation. The more interesting vessels from this place are shown in Figs. 9, 10, 11, 12, 13.



FIG. 12.—Vessel of earthenware. Mayes mound.
(Height 2.7 inches.)



FIG. 13.—Vessel of earthenware. Mayes mound.
(Height 8 inches.)

In a trial-hole which did not encounter bones, was a barbed arrowhead of flint, about one inch in length.

About 130 paces WSW. from the mound just described is the other mound, which is irregularly circular in outline, about 4 feet in height and 180 feet in diameter. This mound was carefully searched without any indication of its former use as a place of burial.

WILEY PLACE, CATAHOULA PARISH.

The place belonging to Mr. Mitchell Wiley, who resides upon it, is about at the middle of the southern shore of Lake Larto. It is to this place the lake owes its reputation as a center for the discovery of aboriginal relics, and not to the Mayes mounds, which presumably had not been investigated before our coming.

Immediately on the shore of the lake, on Mr. Wiley's place, are three low mounds of irregular outline, apparently greatly worn as each has a building

upon it and is constantly subjected to the going and coming of persons and of stock. There is also, beyond these mounds but in sight from them, another one 3 or 4 feet high and possibly 50 feet in diameter. Into this mound, Mr. Wiley informed us, he had dug centrally a considerable excavation without finding anything. The mound, upon inspection, proved to be of raw clay.

According to Mr. Wiley, but one of the three low, flat mounds contains burials, so far as his experience goes. While conversing with us Mr. Wiley removed from this mound, with a knife, a human femur, which lay partly exposed on the surface. Some years ago, Mr. Wiley explained, a member of the faculty of a college in New Orleans had dug extensively into this mound, finding pottery and two undecorated pipes of earthenware, evidently of the biconical kind, according to Mr. Wiley's description.

Mr. Wiley informed us that aboriginal relics were constantly being unearthed at the place during his cultivation of the fields, but none presented any feature of especial interest, according to the descriptions furnished by him.

In Mr. Wiley's possession were: a number of small, barbed arrowpoints of flint; an earthenware vessel representing a frog, from which parts were missing; a charm-stone, elongated ovoid in shape, made from a pebble, bearing a groove to facilitate suspension; a discoidal bead wrought from part of a shell, the thickness suggesting marine origin; three or four small stone hatchets.

The effigy-vessel, through the base of which a ceremonial hole had been broken, was rudely made and inferior to many vessels of the same class from other localities.

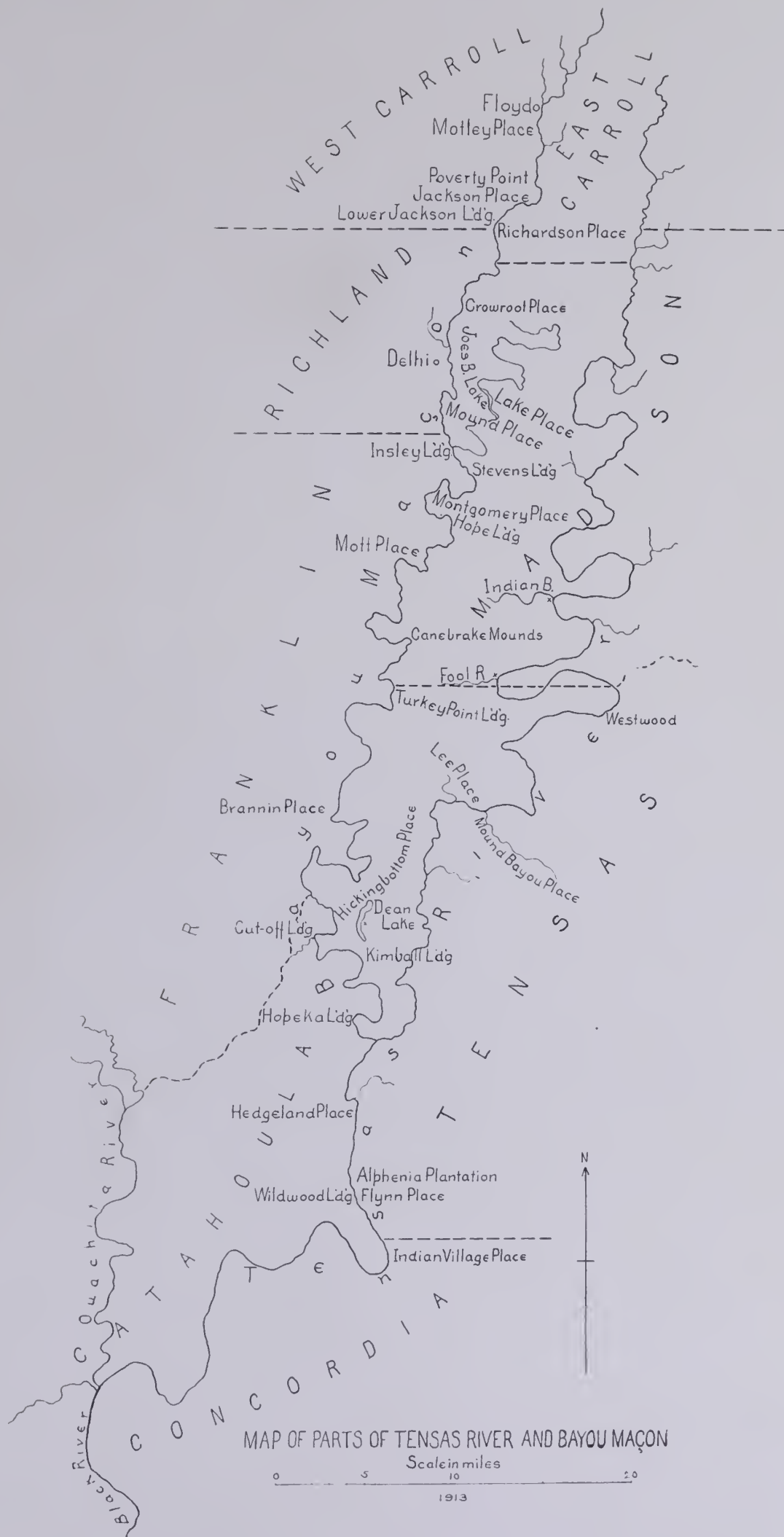
As the lake had covered Mr. Wiley's property in the great flood of the preceding year, and as the water, which was again rising was not far from his home at the time of our visit, Mr. Wiley was unwilling to have digging attempted in the mounds on which his buildings were, and, under the circumstances, we cannot see how his decision could have been otherwise.

TENSAS RIVER, LOUISIANA.

Tensas river has its source in Lake Providence, in the northeastern part of that portion of Louisiana which lies west of Mississippi river, and keeps a southerly course in the main until, at the town of Jonesville, La., it joins Ouachita and Little rivers, the three forming Black river, which continues to its junction with Red river.

Tensas river is considered navigable to a settlement called Westwood, 81 miles by water from the union of the three rivers, but the stream was searched by our agents from the town of Quebec down, a much greater distance.

The Tensas was investigated by us up to Indian bayou, about 22 miles by water above Westwood, by dint of felling projecting trees which barred the passage of the narrow stream, and by lopping off interfering boughs. The river could have been explored considerably farther in the high water prevailing



at the time, had it not been reported that a mass of entangled logs, trees, and driftwood, known as a jam, formed somewhat above Indian bayou, effectually blocked the stream. Probably with the force at our command and expenditure of time, the jam might have been contended with successfully, but the result of our archaeological work on Tensas river had not been such as to encourage us to proceed, especially as the report of our agent as to the river above was adverse.

Inspection of the map accompanying this report might lead one to judge that parts of that portion of the Tensas covered by us had been slighted by our expedition, since so few places are shown where archaeological work was done, but in point of fact much of that portion of the Tensas territory investigated by us is uninhabited near the river,—mainly timberland, sometimes with heavy undergrowth or canebrake,—and though mounds may be present in woods or swamps bordering such parts of the stream, these mounds were not visible or in a position to be found by unguided search, nor were inhabitants to be seen from whom inquiries could be made.

The archaeology of Tensas river is in the main uninteresting. Burials (which were made in mounds and not in cemeteries) had so few artifacts with them that that feature constitutes the most interesting part of the archaeology of the stream.

SITES INVESTIGATED.

- On Indian Village Place, Concordia Parish.
- Near Wildwood Landing, Catahoula Parish.
- On the Flynn Place, Tensas Parish.
- On Alphenia Plantation, Tensas Parish.
- On the Hedgeland Place, Catahoula Parish.
- On the Mound Bayou Place, Tensas Parish.
- On the Lee Place, Tensas Parish.
- At Fool river, Madison Parish.
- Near Indian Bayou, Madison Parish.

MOUND ON INDIAN VILLAGE PLACE, CONCORDIA PARISH.

About one-quarter mile in from the landing, on property of Mr. H. C. Luckett, of Natchez, Miss., is a mound about 5 feet high and approximately 100 feet in diameter of base. This mound at one time had been quadrangular, with a summit-plateau. There was no history of any discovery of artifacts or bones on the place, and as the mound had been devoted to burial purposes in recent times, no work was done there by us.

MOUND NEAR WILDWOOD LANDING, CATAHOULA PARISH.

About one-half mile westwardly from Wildwood Landing, in a cultivated field forming part of the plantation of Mr. Robert J. Eltringham, who resides upon it, is a mound fairly symmetrical and evidently about square originally. The sides face the cardinal points. Its diameter of base is 100 feet approximately,

of which about 60 feet lie beneath the summit-plateau. Its height is 7 feet.

This mound, which evidently had belonged to the domiciliary class, was filled with recent burials, the headstones extending to the very margin of the summit-plateau. No investigation was attempted.

Careful search in surrounding territory came upon no indication of an aboriginal cemetery, nor was there any history of discoveries made in the course of cultivation.

MOUND ON THE FLYNN PLACE, TENSAS PARISH.

The Flynn Place is the property of Mr. H. D. Hassler, of Wildwood, La., a short distance farther down the river. About one-half mile in from the water, in a cultivated field on the upper part of the Flynn Place, is a mound slightly less than 6 feet in height, which at one time, no doubt, had been quadrangular with an extensive summit-plateau—presumably a mound of the domiciliary class. The outer part of the mound, however, has been plowed to such an extent that its basal outline is very irregular. Measurements at the time of our visit gave diameters of base of 70 feet and 95 feet.

This mound had been extensively used for burial purposes in recent times. A few holes sunk where no sign of former interments was apparent, showed the mound to be of raw clay.

Two neighboring rises in the field surrounding the mound, on which were a few fragments of flint and of pottery, were investigated by us, but undisturbed soil was soon reached without the discovery of artifact or bone.

MOUNDS ON ALPHENIA PLANTATION, TENSAS PARISH.

Alphenia Plantation, bordering Tensas river, the owner of which is Mr. F. E. Bowman, who resides upon it, has in sight from the water three interesting mounds, all of which, with extensive summit-plateaus, probably have been about square at one time, though wash of rain has rounded the corners and in places has cut into the sides of the mounds to a considerable extent.

For greater convenience in description we shall assign letters to these mounds, calling that nearest the river, *A*; its nearest neighbor, *B*; and the third mound, *C*. These mounds are thus lettered on the accompanying plan (Fig. 14).

Before proceeding to give the dimensions of these high places it may be well to remind those who are not familiar with mounds through actual work in the field that all measurements of mounds are lacking in exactness, for who can determine, in taking a diameter, precisely where field ends and mound begins, or can say, in a measurement of height, that he has selected the exact level from which to take it? When mounds have suffered considerably through wash of rain or of flood, or by trampling of cattle, the measure of uncertainty is, of course, increased since these agencies tend to augment the irregularity of the sides and to create depressions in the surrounding ground.

Mound *A*. Height, 19.5 feet; diameter of base, 170 feet.

Mound *B*. Height, 14.5 feet; diameter of base, 130 feet.

Mound *C*. Height, 18 feet; diameter of base approximately the same as that of Mound *A*.

All three mounds had about the same diameters of summit-plateau, namely, 70 feet.

At the side of each mound was a depression, filled with water at the time of our visit, whence came the material for its building. These ponds were, respectively, west of Mound *A*, north of Mound *B*, south of Mound *C*.

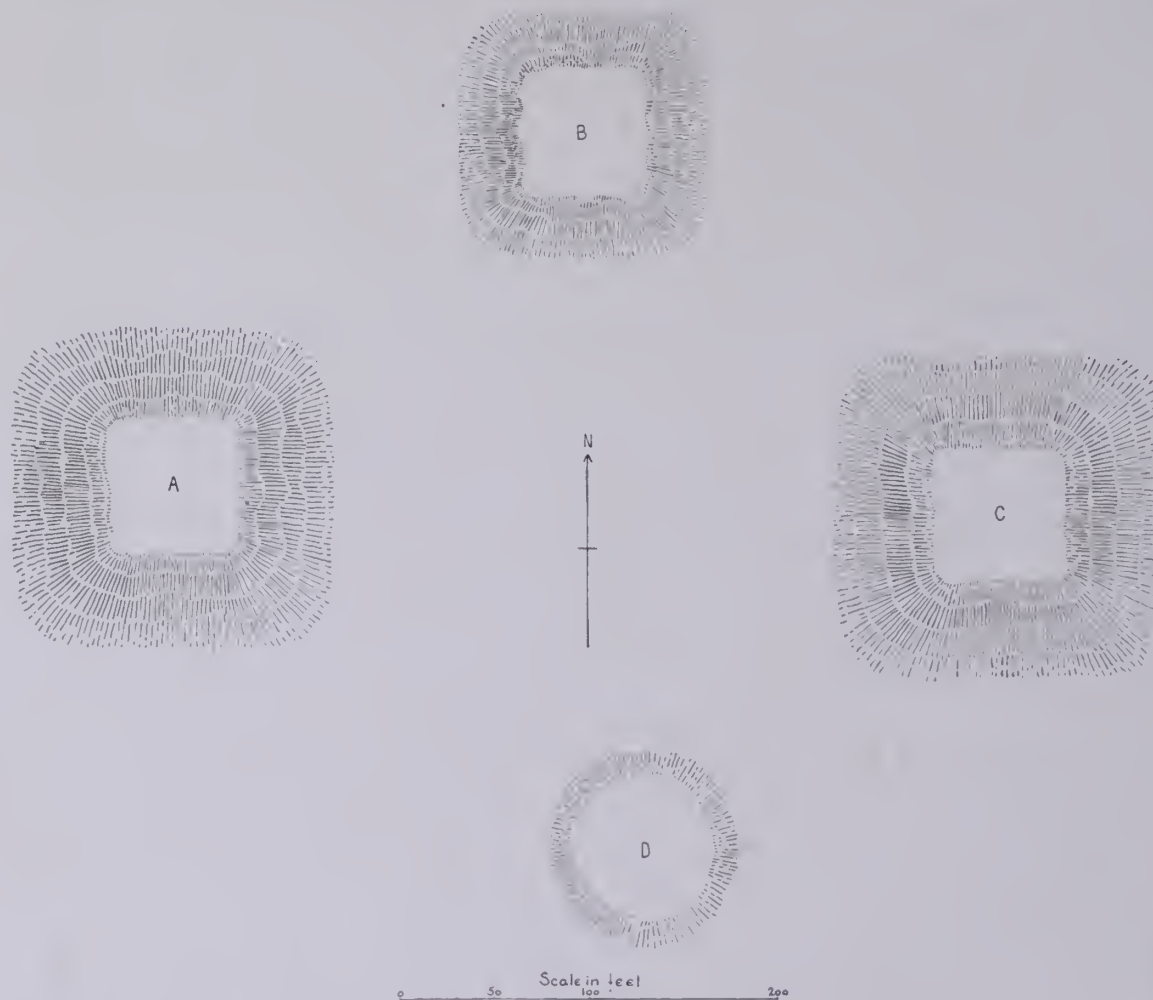


FIG. 14.—Plan of mounds. Alphenia Plantation.

The sides of the mounds all face the cardinal points, and an equally interesting feature is that the three mounds have been arranged to form a triangle, the apex of which is directed toward the north, while the base is east and west. Furthermore, to the southward of the base of this triangle is the remainder of a mound, marked *D* on the plan. This mound at the present time is less than 2

feet in height, but has been under cultivation for many years. The owner of the plantation, Mr. Bowman, informed us that it was cleared by his father in 1844 and that the mound in question at that time was some feet higher than it is at present. While this mound can never have rivaled the others in size, it no doubt was an important landmark and probably was the nucleus of what was intended to be a much larger mound.

If this mound be taken in conjunction with the other three, we find a diamond-shaped figure with mounds at the four angles, which angles are directed toward the cardinal points of the compass, or nearly so. In the case of the southern mound it was, of course, impossible to determine the center, owing to the partial demolition referred to.

Still further, if lines be drawn connecting the centers of opposite mounds (the center of Mound *D* being to a certain extent assumed), a cross will be formed whose arms point approximately toward the cardinal points—a cross of the four directions.

Mounds *A* and *C* in comparatively recent years had been devoted to purposes of burial, Mound *A* being the cemetery of the Bowman family. Investigation of these mounds, of course, was out of the question.

Mound *B*, used as a place of refuge for stock in flood-time, had a summit-plateau whose soil presented a dark appearance. Ten trial-holes, a number of which were afterward greatly enlarged, were put down with a feeling of considerable confidence, which later was justified by the discovery of eight burials.

Some of these burials presented an interesting feature. While five of them were comparatively superficial, ranging between 10 inches and 2 feet in depth, and had been put down from the surface, three other burials were from 4.5 to 5 feet in depth. These burials were not in pits extending from the present surface, as was shown by the presence of unbroken strata above them, but lay in soil darkened by the presence of organic matter, with which were mingled midden débris and remnants of fireplaces. This deposit of soil evidently marked an earlier stage in the growth of the mound when it had served as a place of abode prior to its increase in height.¹ Soil of a much lighter color and undisturbed, as we have said, lay between the upper and the lower dark layers, and this, no doubt, had been brought when the increase of the mound was decided on. We shall describe each burial in detail.

Burial No. 1, a bunched burial one foot in depth, measured from its upper surface, included eleven skulls, badly decayed and broken, as were all the human remains from this mound. One of the skulls was that of a child.

The bunched burials in this mound were not symmetrically piled as such burials sometimes are, but, though limited in width, extended considerable distances.

Burial No. 2, bunched bones with two skulls, was 20 inches down.

¹ A notable instance of this was found by us in one of the great mounds of the group at Moundville, Ala.

Burial No. 3. At a depth of 22 inches, had been two skeletons of adults, lying at full length on the back, the skulls together, the bodies radiating somewhat. A narrow pit from the surface, probably made in recent times, perhaps a post-hole, had removed the skulls and the upper part of each thorax.

Burial No. 4, a bunch with one skull; depth, 2 feet.

Burial No. 5, a bunched burial 4.5 feet from the surface, having fifteen skulls.

Burials Nos. 6 and 7. Each a bunched burial with one skull, at a depth of 10 inches and 4.5 feet, respectively.

Burial No. 8. A bunched burial having three skulls, 5 feet down.

If mortuary deposits had been made with these burials, such deposits were of a perishable nature, since absolutely nothing lay with the skeletal remains that can be considered to have been intentionally put in. With one burial was an unworked astragalus of a deer, and with another, a small bit of stone grooved by use as a hone. In the soil near a burial was a graceful arrowhead of flint, 2 inches in length and slightly more than .5 inch in maximum diameter, the point unfortunately missing.

Among the few fragments of pottery found in the digging were one with a decoration of faint, trailed lines, and a part of a handle, also with line-decoration, which evidently had extended at a right angle from the rim of a vessel.

On the fields in which the mounds were was considerable midden débris, especially on the surface of Mound *D* and on a slight rise nearby. Some arrowheads of flint, small and barbed, were found, and quantities of fragments of pottery could be seen, including some bearing on one side a uniform coating of red pigment. All these were in small fragments, as one would expect them to be, having been plowed up and under through a long period of years.

On the surface of Mound *D* was picked up a graceful celt of quartzite, 2.5 inches in length.

Considerable digging in the field surrounding the mounds showed remains of former occupancy but unearched no sign of skeletons.

MOUNDS ON THE HEDGELAND PLACE, CATAHOULA PARISH.

The Hedgeland Place, belonging to Mr. H. W. Foeman, has two mounds upon it, both in sight from the landing. That nearest the water, about 13 feet in height, has been quadrangular, but is so greatly washed and worn that measurements as to its present diameter of base are practically valueless. One measurement gave 125 feet, but others, if taken, would show marked variation. An exposed section of this mound showed it to be of clay, with no evidence of use for burial purposes.

In a cultivated field is a mound 10 feet in height, which has suffered to an even greater extent by the ravages of time. Two measurements gave diameters of 165 feet; but this was a coincidence, as the basal outline was very irregular. What remained of the summit-plateau had been used as a cemetery in recent times.

MOUND ON THE MOUND BAYOU PLACE, TENSAS PARISH.

On the Mound Bayou Place, belonging to Mr. A. Blanche, who resides upon it, is a mound about one-quarter mile back from the landing, slightly less than 12 feet in height. This mound, which borders the road, is quadrangular, the basal diameters being 130 and 110 feet; those of the summit-plateau, 60 and 40 feet in the same directions. The sides of this mound do not face the cardinal points, nor are its corners directed toward them. As the summit-plateau of this mound had been used extensively for burials in recent years, no digging into it was attempted.

Across the road from the mound, in a cultivated field, was a small rise into which we dug unsuccessfully.

MOUNDS ON THE LEE PLACE, TENSAS PARISH.

In a cultivated field in sight from Lee Landing, on property belonging to Mrs. C. L. Lee, of Gilbert, La., is a circular mound 4 feet in height and 65 feet in diameter of base. Nearer the landing, beside the road, is a somewhat smaller mound on which stands a building intended for cattle. We were informed that both these mounds had been made in recent times as places of refuge in high water.

MOUND AT FOOL RIVER, MADISON PARISH.

An angle formed by the union of Fool river with the Tensas is much higher ground than is any neighboring territory, and for this reason, and because bits of pottery lie on the surface there, the whole of this high place has been called an Indian mound by lumbermen and others who occasionally use it as a camping place and whose numerous flasks, drained of their spirituous contents, scattered over the ground are about the only sign of the civilization of the white man to be seen for miles around.

That this high ground is a natural formation is clearly shown by a wide section exposed by the wash of Tensas river. On the alluvial clay, however, is a thin, superficial stratum caused by aboriginal occupancy, in which is the usual midden débris—hence the sherds found on the surface.

About fifty yards back from the Tensas river, on this elevated ground, is an irregularly circular mound, about 100 feet in diameter and somewhat more than 4 feet in height.

Each of seven trial-holes sunk into this mound almost at once encountered human remains, which were found in such quantities in the three trial-holes first investigated that these were greatly enlarged and carefully examined, the digging out of the remaining burials being dispensed with.

The upper part of the mound was composed of a layer about 16 inches in depth, dark in shade, perhaps from having been gathered from the nearby swamp, but containing no midden débris whatever. Below this was a stratum of soil black from admixture of organic matter, 3 feet 4 inches deep (of course

the depth of these layers varied somewhat locally), in which were quantities of broken mussel-shells, some fragments of pottery and of bones of lower animals, and a few fireplaces. It was clear that this lower layer, which rested upon undisturbed clay, had been a dwelling-site to which an addition had been made.

Burials were present in both layers, but no signs of pits were apparent, and if any had been made from the present surface of the mound into the lower layer, they would have been filled with a mixture containing shells and other débris.

A number of burials lay immediately on top of the lower layer, so that it seems likely that those living on the original, or under, layer buried in it for a period, and that at some time the contents of the bone-house had been spread over the surface of the original mound and the upper layer of clay had been placed upon them. By far the greater number of burials, however, seemed to be in the lower part of the mound, which probably had been built up throughout a long period of occupancy.

Judging from the three excavations made by us, the lower part of the mound had been buried into to such an extent that in places it had become a complete entanglement of bones. The burials found, none of which was deeper than about 3 feet, included sixty-six skulls, thirteen of which had belonged to children or infants.

The form of burial, in the main, had been at full length on the back (one skeleton lay extended, face down), but to such an extent had grave cut through grave in this mound that only parts of many extended burials remained, the rest of the skeletons being mixed in the contents of the disturbing graves.

Also in this mound it had been the custom, when interring a skeleton the bones of which probably were held together by ligaments at the time, to gather up and put with this burial a quantity of loose bones belonging probably to some who had died at an earlier period. For example, one extended burial in the mound had beside it and above it a mingling of bones belonging to skeletons of two adults and of one child.

With all the skeletal remains removed by us from this mound was not an artifact of any kind. Scattered in the midden débris were a few small fragments of pottery, several bearing decoration of incised, parallel lines and two having a uniform coating of red pigment.

For some reason, stone of any kind was, so far as our investigation went, of extreme rarity in the mound; only in one instance (a fractured pebble) was any encountered.

A mound on the bank of the Tensas, about in line with the preceding one, 3 feet high and 60 feet in diameter, proved to be of clay and contained no burials so far as could be determined.

MOUNDS NEAR INDIAN BAYOU, MADISON PARISH.

Part of the extensive property on Tensas river, belonging to Mr. A. E. Hinds, who lives near Indian bayou, is bounded on the north by that stream

and on the east by Tensas river. Near Mr. Hinds' residence are four mounds and a small rise by the roadside, all near together and in sight from the river. The mounds have each a building upon it, and three of them, originally small, have been so worn and washed that they are of inconsiderable size.

The largest mound, which has been square, with the sides facing the cardinal points, has rounded corners at present, but is otherwise well preserved. The height is 12 feet 8 inches; the diameter of base is about 140 feet. The summit-plateau is 50 feet in diameter.

Owing to the presence of buildings, these mounds were not dug into by us.

Following the Tensas river northward about half a mile to Indian bayou, one comes upon a group of eight mounds in woods, which form an irregular ellipse with two mounds facing each other and three mounds on each side. This ellipse is about 88 yards by 54 yards, interior measurement, and the mounds which compose it are visible from the banks of the stream, some of the mounds in fact bordering the water. These mounds, which are very irregular in outline, are of moderate size, the northernmost being 7 feet 6 inches in height and 120 feet by 135 feet in diameters of base.

These mounds for convenience were assigned letters of the alphabet, beginning with the largest mound, *A*, and continuing in order through the western side of the ellipse and then along the eastern side bordering the water. As the mounds on Mr. Hinds' place are the only refuge in the case of high water, we did not consider it fair to dig into them to any great extent, though Mr. Hinds, with great courtesy, placed no restrictions upon us. All, however, were dug into to a greater or less extent, some giving evidence of being made of raw clay, presumably without burials.

Mound *C*, about 2 feet in height, however, had scattered fragments of mussel-shells mingled with the soil that composed it. The skeleton of an adult, extended on the back, was found in this mound at a depth of 28 inches.

Mound *E*, on the bank of the stream, has been undermined slightly by the water and has, at the opposite side, a road passing over it. Two diameters of its irregular basal outline were 77 and 90 feet. Its height is 5 feet.

Two recent burials have been made in this mound, so that our digging in it was somewhat restricted. Aboriginal burials in numbers were reached almost at once by trial-holes, which showed the mound to be composed approximately of a superficial layer of dark soil mingled with organic matter and quantities of fragments of mussel-shells. Below this layer was a stratum of light-brown clay, 2 feet 8 inches in depth, which showed no admixture indicating former aboriginal occupancy. Below the clay was a stratum 1 foot 8 inches in depth containing organic matter and broken mussel-shells, but to a less extent than did the superficial layer. Below this was undisturbed clay.

This mound, then, had been a dwelling-site; had been increased in size and then had been occupied for a further period as a place of abode. The burials had all been made from the top layer into the stratum of clay below it,

and could be easily traced by means of the black soil introduced into the clay from above.

The burials from this place were of the kind we have just described in connection with the mound at the mouth of Fool river, which is some miles below Indian bayou, having been burials at length, with loose bones around them, and irregular piles of bones of considerable extent. In all, forty-four skulls, two of which had belonged to children, were encountered, in poor condition.

With one burial were: a small undecorated bowl; a pot of moderate size, having by way of decoration a few vertical and diagonal incised lines. The bowl rested on a disk of ferruginous sandstone, 2.5 inches in diameter, pitted on each side.

With another burial was a pebble 1.5 inch in diameter, on which rude facets had been worked.

No other artifacts were found with burials or apart from bones.

Our search for burials in other mounds of this group was unsuccessful.

BAYOU MAÇON, LOUISIANA.¹

Bayou Maçon (the map showing sites on Bayou Maçon is included with that of Tensas river, which precedes) rises in southeastern Arkansas, not far from Mississippi river, and flows in a southerly direction, passing into the state of Louisiana, where it continues in the same direction until its junction with Tensas river.

The stream flows through comparatively low, alluvial land, considerably higher on the western side so far as our investigation extended, on which side of the stream the most important sites are to be found.

Bayou Maçon is reported navigable from its mouth to the town of Floyd, La., a distance of 112 miles, following the course of the stream. It was explored in advance by our agents, Captain Platt and a companion, from Floyd to its union with Tensas river, and was investigated by us over the same extent.

Though no attention has been given by the United States government to the removal of snags or of overhanging trees from the bayou farther up than the town of Floyd, yet with the high water in the bayou at the time of our visit, no doubt with care and with effort our journey could have been considerably lengthened, had it not been that the stream a short distance above Floyd was hopelessly blocked, so far as our limited force was concerned, by a long-time accumulation of driftwood.

On the whole, our investigation of Bayou Maçon was disappointing. The stream is not far to the eastward of Bayou Bartholomew and Ouachita river, along which were found by us the most beautiful aboriginal pottery known from the Mississippi valley, as to which exact data are to be had. Such earthenware as was found by us along the bayou was not of a kind to uphold the high reputation of the best aboriginal ware from the lower Mississippi region.

¹ The part of Bayou Maçon investigated by us is in Louisiana.

The most interesting part of Bayou Maçon, speaking from an archaeological point of view, is, so far as our investigation extended, the great aboriginal site at Poverty Point below the town of Floyd, the height of whose principal mound, 70 feet, in this part of Louisiana, is a revelation¹ to archaeologists.

SITES INVESTIGATED.

Hopeka Plantation, Catahoula Parish.
 On Dean Lake, Franklin Parish.
 Near Cut-off Landing, Catahoula Parish.
 The Hickingbottom Place, Franklin Parish.
 The Brannin Place, Franklin Parish.
 Near Turkey Point Landing, Franklin Parish.
 The Canebrake Mounds, Madison Parish.
 The Mott Place, Franklin Parish.
 Near Hope Landing, Madison Parish.
 The Montgomery Place, Madison Parish.
 The Stevens Place, Madison Parish.
 The Insley Place, Franklin Parish.
 The Mound Place, Madison Parish.
 The Lake Place, Madison Parish.
 The Crowroot Place, Madison Parish.
 The Richardson Place, East Carroll Parish.
 Near Lower Jackson Landing, West Carroll Parish.
 The Jackson Place, West Carroll Parish.
 Poverty Point, West Carroll Parish.
 Motley Place, West Carroll Parish.

HOPEKA PLANTATION, CATAHOULA PARISH.

Hopeka Plantation, near the union of Bayou Maçon with Tensas river, is the property of Messrs. H. & C. Newman, of New Orleans.

On the lower part of Hopeka Plantation is a field in which are several low rises whose surfaces are thickly strewn with bits of pottery and fragments of flint. Among these were a few slender arrowheads of flint. Also on the surface was found one of those objects of earthenware belonging to the class shown in Plate II. This one, of the double cone variety (Fig. 15), is especially interesting from the fact that a groove has been made around one part of it.



FIG. 15. —Object of earthenware.
 Hopeka Plantation. (Full size.)

¹ This site is referred to in Thomas' "Catalogue of Prehistoric Works," p. 104, in which no height is mentioned. There is a reference, however, to Prof. Samuel H. Lockett, Smithsonian Report, 1872, pp. 429, 430, where the site is briefly described, but the height of the great mound is not given.

Two of the rises were dug into, one of which had on the surface crowns of human teeth, but no indications of burials were found in either rise and it was evident that their former contents had been plowed away.

On the upper part of the plantation, in a cultivated field, near the water, is considerable dark soil with fragments of pottery, bits of flint, and arrowheads of the same material, broken and whole, on the surface. Trial-holes, however, failed to unearth any signs of interments.

Still farther up on the plantation, in sight from the water, is an irregular eminence with a wide trench, or barrow-pit, surrounding it. Although we were confident that this mound was modern, both on account of its shape and the presence of the barrow-pit, we did a small amount of digging which came upon raw clay. We were informed also, by persons living on and near the plantation, that the mound was believed to have been made comparatively recently to afford refuge for cattle in periods of high water.

MOUND ON DEAN LAKE, FRANKLIN PARISH.

On Dean lake, which is probably only a former course of Bayou Maçon, is a mound which may be reached by going about two miles in a northerly direction from Kimball Landing on Bayou Maçon.

The mound, the name of whose owner we were unable to learn, is about 100 yards from the eastern bank of Dean lake, in woods which one should enter about one-third up the lake from its southern end. The mound, 3.5 feet in height, is roughly circular, with a diameter of about 80 feet. It has been greatly trampled by cattle.

Seven trial-holes showed the mound to have a thin surface layer of dark soil and to be otherwise of yellow clay, except where dark earth from the surface filled pits. A base-line was present at a depth of about 4 feet.

Seven burials were reached by the trial-holes, which were much enlarged before the interments were removed.

Burial No. 1, a bunch extending down from the surface, included twenty-four skulls. This grave contained dark, superficial soil continuing down from the surface.

Burial No. 2 was of the bunched variety with one cranium. This burial was in yellow clay, and apparently had been made during the formation of the mound, as none of the dark soil of the surface was around it.

Burial No. 3, a bunch having thirteen skulls, 6 inches down. With this burial were two biceve stones of quartzite, respectively 2.3 inches and 2.2 inches in diameter, and a small drill of flint.

Burial No. 4, a bunched burial with four skulls, lay 15 inches down, in undisturbed, yellow clay. In association was a small lump of sandstone.

Burial No. 5, just below the surface, was a bunch having nine crania.

Burial No. 6, a bunched burial with a single skull, lay 18 inches down, in undisturbed, yellow clay.

Burial No. 7. This burial, a bunch with a single skull, was in the yellow clay, 22 inches from the surface.

MOUNDS NEAR CUT-OFF LANDING, CATAHOULA PARISH.

By the side of a disused highroad, about 250 yards in a westerly direction from Cut-off Landing, on property belonging to Mr. H. A. Lewis, of Wisner, La., is a small remnant of a mound, the remainder of which has fallen into the Cut-off, a bayou entering Bayou Maçon nearby.

Four holes sunk into this remnant (about all it would accommodate) each came upon skeletal remains, five burials in all being encountered. Of these, three were bunched burials, the bones all badly decayed, not arranged in piles but forming long and comparatively narrow deposits. One of these burials had sixteen skulls; one had nine skulls, three of which had belonged to children; and one had two skulls, one of which was that of a child. There were also two full-length burials of adults, extended on the back. All these burials were without mortuary deposit of any kind.

About one-quarter mile westwardly from Cut-off Landing, in a fallow field also belonging to Mr. Lewis, is a mound 11 feet in height, which has been so subjected to wash of rain (the earth having perhaps been loosened by trampling of cattle) that the sides are furrowed to such an extent that the mound has no regularity of outline. Measurements taken in two directions gave respectively as diameters of base 127 feet and 118 feet, but other measurements, we are convinced, would show a more marked divergence.

Seven trial-holes put down in the upper parts of the mound went through mixed soil to a depth of slightly more than 3 feet where they reached a layer of dark material 9 inches thick. Below this layer was hard, yellow clay containing no admixture.

Evidently this mound had been constructed to a certain height and then had served as a place of domicile for a considerable time, as evidenced by the dark layer. Later the mound had been increased in height by about 3 feet, not by the addition of clay dug from one place, but gathered here and there superficially. No sign of interment was encountered.

About one-half mile above Cut-off Landing, on the bank of the bayou, is the home of Mr. E. L. Lewis. A short distance from the house, by the side of a road which has cut a part from it, is an irregular rise about 2 feet in height and so worn and washed that it is almost impossible to distinguish the mound from the surrounding area. Considerable digging into this rise showed it to be composed of raw clay. No evidence of artificial origin was encountered.

MOUND ON THE HICKINGBOTTOM PLACE, FRANKLIN PARISH.

In woods belonging to Mr. Louis Hickingbottom, residing nearby, is a mound, 1 foot 9 inches in height, in sight from the stream. The outline is irregular. Two diameters were 75 feet and 95 feet. This mound apparently had been built for residential purposes, as no sign of interments was discovered.

MOUND ON THE BRANNIN PLACE, FRANKLIN PARISH.

In a cultivated field forming part of the Brannin Place, of which Messrs. E. H. Rateliff and W. J. Feltus, of Natchez, Miss., are proprietors, is a very symmetrical mound, 15 feet in height, in full view from the water. Its basal diameters are, respectively, N. and S., 143 feet; E. and W., 122 feet. The diameters of the summit-plateau in the same directions are 80 feet and 66 feet. The sides of the mound face the cardinal points. The mound, so far as our trial-holes could determine, is of raw clay and contains no trace of burials. There are almost no signs of former aboriginal occupancy in the surrounding fields.

MOUNDS NEAR TURKEY POINT LANDING, FRANKLIN PARISH.

In sight from Turkey Point Landing, in a cultivated field belonging to Mr. A. M. Scott, who lives farther inland, is a mound with circular base, somewhat more than 3 feet in height when measured from the outside, but showing a total depth of about 4 feet when the measurement was taken by means of a trial-hole from the surface to a dark stratum presumably the original base.

The mound, which has been plowed over for a considerable time, and across part of which a private road passes, is composed wholly of dark soil. Its diameter was about 95 feet. In the southwestern part of this mound were numerous burials. Of eleven trial-holes put down, seven in this part of the mound and near it came upon human remains, and in removing these, other burials were found, making the total number thirty-six, all very badly decayed.

Of these thirty-six burials, which seem to have been interred in graves from the surface and none of which lay at a depth greater than 26 inches, seventeen were extended at full length on the back; sixteen were bunched burials; and three were remains disturbed by the plow. None of the bunched burials had more than three skulls, though several of the larger burials of this class, which had been somewhat disturbed by cultivation on the mound, may have had more than that number originally.

Various artifacts, mostly vessels of earthenware, lay with some of the burials of both classes.

With a bunched burial was an undecorated, biconical pipe of earthenware, quadrangular in cross-section, a very ordinary type.

With another bunched burial were three ear-plugs of claystone, not directly with the skull but near other bones. These ear-plugs, having cylindrical bodies with heads, include a pair, undecorated, each 2.1 inches in length. The other, 2.2 inches long, has two incised, concentric circles on the head and an incised line surrounding the shank near the end.

A small, rough arrowhead or knife, of flint, also lay near bones.

Thirty-seven earthenware vessels, or large parts of them, (evidently some of the vessels had been struck in plowing), lay with the burials, usually with the skulls, even in the case of bunched burials, several vessels in some instances with a single burial. Numerous interments, however, were without artifact of any kind.



FIG. 16. Vessel of earthenware. Near Turkey Point Landing. (Height 3 inches.)



FIG. 17.—Vessel of earthenware. Near Turkey Point Landing. (Height 4.5 inches.)

The earthenware at this place, tempered as a rule with coarse sand or fine gravel, is without polish, save in two or three instances where an attempt has been made to confer it, and is soft, presumably through insufficient firing. The forms in nearly every instance embrace the bowl and the pot and vessels between the two. The bottle appears but once—small with a wide mouth. A pentagonal base separated from the rest of the vessel was present.



FIG. 18.—Vessel of earthenware. Near Turkey Point Landing. (Diam. 4.3 inches.)

As might be expected in the lower Mississippi region, the vessels are symmetrical, the ware is fairly thin, and a large proportion of them bear decoration, though the artistic aspiration that prompted the adornment of the ware was decidedly lacking in the skill or care necessary to its realization, much of the decoration, most of which is incised, being faint and with irregular line-work. Parallel lines, and curved lines including the scroll, predominate. No attempt at coloring is exhibited.

Several of the better vessels from this mound are shown in Figs. 16, 17, 18, 19, not because they present any special feature of interest, but to illustrate the earthenware of the place. One pot, fully equal to any of them, is omitted from the illustrations as in shape and in decoration (a scroll design on the body and parallel lines on the neck) it is almost exactly similar to one found by us at Seven Pines Landing, Morehouse Parish, on Bayou Bartholomew, La.¹ This vessel from the Turkey Point mound has been sent as a gift to the United States National Museum.

Presumably a large number of burials remained in the mound when our investigation came to an end, as additional digging was not desirable in view of the rising river.

Two small rises of the ground, respectively on properties of Messrs. T. S. Knight and N. H. Hill, not far north of the mound on the Scott Place, were dug into by us without success.

¹ "Antiquities of the Ouachita Valley," Fig. 172. Journ. Acad. Nat. Sci. of Phila., Vol. XIV.



FIG. 19.—Vessel of earthenware. Near Turkey Point Landing. (Height 3.8 inches.)

THE CANEBRAKE MOUNDS, MADISON PARISH.

In canebrake and woods are three mounds which we shall call *A*, *B* and *C*, respectively.

Mound *A* is the first reached by one ascending the river, and as is also the case with Mound *B*, is less than fifty yards from the water and visible from it when foliage does not intervene, though one seeking these mounds had best obtain a guide.

The mounds, beside each of which was a depression containing water at the time of our visit, are situated in respect to each other as follows:

From the center of *A* to the center of *B* (so nearly as the centers of mounds shaped so irregularly as these were could be determined) was 297 feet $49^{\circ} 30'$ E. of N.; from the center of *A* to the center of *C* was 215 feet $1^{\circ} 30'$ S. of E.; from the center of *B* to the center of *C*, 207 feet 3° W. of S.

The mounds, which are a favorite resort of cattle and which, no doubt, had been somewhat trampled down by them and washed by rain, had approximately the following dimensions:

Mound *A*, height, 4.5 feet; diameters, 75 feet and 100 feet.

Mound *B*, height, 3.5 feet; diameter, 95 feet.

Mound *C*, height, 4.5 feet; diameter, about 85 feet.

Mound *A* had a base-line about 8 inches thick, no doubt marking the original surface. Beneath this line was a yellow-gray mixture of sand and clay, showing no disturbance. Above the base-line was yellow clay about 26 inches in thick-

ness in the central part of the mound. Then above, came slightly more than 2 feet of dark soil, mainly clay discolored by admixture of organic matter. Doubtless the mound had been made of yellow clay and then dwelt upon while the upper layer of 2 feet, in which were fragments of mussel-shells and other débris, was forming.



FIG. 20.—Vessel of earthenware. Canebrake mounds. (Diam. 5.5 inches.)

Seven large trial-holes came upon human remains in one instance only. In the center of the mound, 38 inches down, were the legs and feet of a skeleton, extended and in anatomical order. These bones were well preserved, without break and in marked contrast to all the other bones found elsewhere at this place, which were so decayed that they were often represented by friable fragments only.

The bones in Mound A did not seem to lie in a grave, nor, so far as we could determine, had another grave cut off the part of the skeleton that was missing. Much digging was done in all directions around the bones, showing the basal

layer beneath to be undisturbed. Some distance from the other bones was part of a left radius in equally good condition. Presumably there had been some disturbance.

In other parts of the mound were an arrowhead of flint with shoulders and a stem, and that part of an earthenware platform, or "monitor," pipe, in which the hole is present, having a small part of the bowl.

Presumably Mound *A* was domiciliary in the main.

Mound *B* was variously composed. Seemingly it had been built upon a dwelling-site of very dark soil containing some mussel-shells. This dark, basal part was reached at different depths. Above this was the later mound, in places made of dark soil, in other parts of a clay lighter in shade.

Burials in this mound cut through no layer, but lay in and under homogeneous material so that it was impossible to distinguish pits.

Fourteen trial-holes, some of which were much enlarged after the discovery of burials, resulted in the finding of seventeen interments, the deepest lying 32 inches from the surface, as follows: extended on the back, two; bunched burials, fifteen.

Of the bunched burials four were without skulls; one had a single skull; seven were with two crania each; one included five skulls; one, ten skulls; one, eleven skulls.

The only object with the dead, other than pottery vessels, was a biconical pipe of earthenware, quadrangular in cross section, of such inferior material that parts adhered to surrounding clay when the pipe was removed.

A disintegrating pipe of limestone, of the same form as the one just described, was found in clay that had been thrown out in digging and presumably had been with an interment.

Thirty-four vessels, nearly all of coarse ware, of which only two were unbroken, lay with the burials, usually near the skulls. All but five bear decoration of some kind, though, as a rule, it is unambitious and of inferior execution. One symmetrical vessel of excellent ware, globular, with flat base and short neck (Fig. 20), bears on the body an incised decoration consisting of four scrolls radiating from circles, with triangles filling in the design. While the execution of this design is not equal to the highest standard of the lower Mississippi region, it is nevertheless well done, and the vessel as a whole is far above average work. Precisely the same decoration, though the shape of the vessel is different, is on one found by us in a mound at Glass,¹ Miss., in which some exquisite examples of

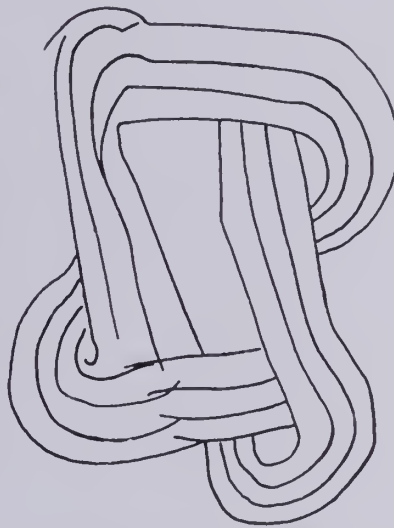


FIG. 21.—Decoration on base. (Full size.)

¹ "Some Aboriginal Sites on Mississippi River," Fig. 8. Journ. Acad. Nat. Sci. of Phila., Vol. XIV.

the potter's art were found. The vessel from the Canebrake mound has additionally, however, an incised design on the base, shown in Fig. 21.

A bottle¹ from this mound, which has seen much better days and at one time may have presented a rather striking appearance, still bears traces, on upright bands, of cream, black, and red, alternately.

Polychrome decoration on pottery is seldom found south of Arkansas river.



FIG. 22.—Vessel of earthenware. Canebrake mounds. (Height 9.1 inches.)

Certain other vessels from this mound are shown in Figs. 22, 23, 24.

Mound C was of black soil above a base-line about 6 inches in thickness, in which were mussel-shells and other débris. Below the base-line was an undisturbed mixture of sand and clay. Above the black part of the mound was a superficial layer of mixed, yellow clay. Both the upper and lower parts of the mound varied somewhat in depth, and it was evident that the lower part had

¹ Given by us, with other vessels, to the Louisiana State Museum, New Orleans, La.

been made and lived upon and that later the mixed, yellow clay had been placed above it and around it so that the depth of this yellow clay was greatest at the marginal parts of the mound. Measurements taken nearly at the center of the mound showed the upper layer of yellow clay to be about 2 feet thick, and the dark soil beneath it to have a thickness of about 3.5 feet.



FIG. 23.—Vessel of earthenware. Canebrake mounds. (Height 4.7 inches.)

Eleven trial-holes, some of which, later, were greatly increased in size, were carried down to and below the base of the mound, reaching first and last, nineteen burials, the deepest 3 feet 8 inches from the surface, and all in the black, lower layer.

All these burials had been made prior to the addition to the mound, inasmuch as there was no sign of the yellow clay in the graves in the dark soil.

Of the nineteen burials, twelve were skeletons of adults, extended on the back. In addition to these were three similar skeletons which had immediately with them collections of bones resembling bunched burials, one having one skull; one, four skulls; one, eleven skulls. There was also a burial which had

been extended on the back, but from which the pelvis and two-thirds of the thighs were wanting. Careful search was made above and below this skeleton for indications of a grave, which, passing through the skeleton in question, could have removed the missing bones, but no such grave was found.

There were also three bunched burials, two with three skulls each and one with six.

No pottery was present with the burials, and the only objects found with them were two small celts of metamorphic rock and of quartzite, respectively, and a mass of sandstone, triangular in plane, smoothed to slight concavity on four of its five sides, possibly by use as a hone. Its length is about 3 inches; its thickness, 1.25 inch; its maximum width, 2.25 inches.



FIG. 24. Vessel of earthenware. Canebrake mounds. (Height 3.9 inches.)

It is interesting to note two mounds in this group, each containing burials with which, in one instance, were numerous vessels, and in the other, none.

MOUNDS ON THE MOTT PLACE, FRANKLIN PARISH.

On the Mott Place, so called from the name of a former owner (also known as the Walnut Bluff Place), is a fine group of mounds, all but one of which are on the property of Mr. A. D. Simmons, residing on the place. The group, nine in number, some in, some on the border of, a cultivated field, form an irregular ellipse of which the two principal mounds constitute the western side, two form the apices of the figure, and the rest the eastern side. There are also several rises and humps in the field and in the line of the ellipse.

In major diameter the ellipse is about 850 feet, the minor diameter being about 575 feet. The mounds, to which letters will be ascribed for convenience in description, will be considered separately.

Mound *A*, within the field, is quadrangular and still preserves a symmetrical appearance. Its height is 28.5 feet. The sides face the cardinal points, or practically do so. The diameters of base are 315 and 285 feet. The summit-plateau, which is under cultivation, is 200 feet by 150 feet.

Mound *B*, 4 feet 8 inches in height, is 240 feet NNE. from Mound *A*, the distance being between the margins of the mounds, as are all such distances given of this group. This mound, which is outside the field, is of very irregular outline, partly through cultivation in the past, furrows being plainly visible upon it, and partly through the presence of a road which passes over part of it. It is between 90 and 100 feet in diameter.

Mound *C*, outside the field, 6 feet in height, is 84 feet E. from Mound *B*. Between wear and wash it has practically no regularity of outline. Its diameter of base is approximately 85 feet.

Mound *D*, also 6 feet in height, practically shapeless, is about 70 feet E. from Mound *C*. It lies without the field. Its diameters of base are 100 feet and 90 feet.

Mound *E*, 8 feet in height, lying outside the field, is 265 feet E. from Mound *D*. This mound has been quadrangular with a flat summit-plateau, but its shape is now very irregular. Its basal diameters are 90 and 100 feet; the diameters of what is left of the summit-plateau are 46 and 63 feet.

Next in line comes what may possibly have been a mound, but evidently was used as a fortification in the Civil War, which its position commanding the water well qualified it to be. It has been omitted from the group of mounds by us, as it is impossible exactly to determine its nature.

Mound *F*, lying outside the field, 12.5 feet high, is 105 feet SSE. from Mound *E*. It is square and still symmetrical. Its sides approximately face the cardinal points. Its basal diameter is 135 feet.

Mound *G*, outside the field, about 4 feet in height, has been plowed out of all semblance of symmetry, though part of a flat summit-plateau still remains. It lies 90 feet S. from Mound *F*; its diameters of base are 75 feet and 100 feet.

Mound *H*, forming part of the cultivated field, is 50 feet SW. from Mound *G*. It is a mere remnant with a height of 6 feet and a basal diameter of about 80 feet.

Mound *I*, 180 feet WSW. from Mound *H*, is on property belonging to Mr. M. A. McDonald living nearby. Its height is about 17 feet; its diameter of base (it is almost square) is about 190 feet, the diameter of the summit-plateau being somewhat more than 100 feet. This mound is fairly symmetrical, though the sides show the effects of wash in places. Many trees are on the summit-plateau.

The mounds of this group, as well as various small rises, were carefully investigated by us, but in each instance, with one exception, Mound *F*, the material of which the mounds are composed (clay, or in one or two instances

clay and sand) was of a raw appearance and gave no encouragement to look for burials, and neither bone nor artifact was found in them.

The summit-plateau of Mound *F* was composed of dark soil, which yielded twenty-six burials to eight trial-holes, some of these burials, of course, being found in the enlargement of the original holes in the process of removing burials.

The rich, dark soil of the summit-plateau, evidently a later addition to the mound, was variously between 4 and 5 feet in depth. Below it was a dark stratum about 6 inches thick, doubtless marking the one-time surface of the mound. Presumably such burials as we found in the dark soil had been buried from the present surface of the plateau, as some were between 8 inches and 16 inches deep. Pits, however, were not distinguishable in this homogeneous soil, which had been subject to no admixture on removal.

A number of graves, however, had been put down from the original surface, and these were easily traced, as the graves had been dug into clay, often in local strata differing in shade, so that the material, when returned, had a mottled appearance. For example, the bottom of the grave of Burial No. 20, the deepest found, was 6.5 feet below the present surface. At this part of the mound the dark stratum marking the earlier period of occupancy was 4 feet 3 inches from the present surface of the mound, so that the grave originally had been 2 feet 3 inches in depth.

It is difficult to compile a statement of the twenty-six burials found in Mound *F*, as some of them were of a composite character, a mingling of bones placed with burials at length. So nearly as could be determined, however, the burials were:

At full length on the back, 5.

Bunched burials, 19.

Single skulls, 2.

Of the bunched burials: seven had one skull each; one had two skulls; three had three skulls; one, four skulls; one, six skulls; one, seven skulls; one, nine skulls; one, ten skulls; one, thirteen skulls; one, sixteen skulls; one, twenty skulls.

Of the extended burials, three were associated with collections of bones which might be termed bunched burials, though account has not been taken of them as such in our enumeration. Those in question had respectively: one skull, two skulls, four skulls.

The bones in this mound were badly decayed, and when crania from it are spoken of reference is made to what once were skulls, though when found but little may have been left of them.

We shall now describe in detail some of the more interesting burials from Mound *F*.

Burial No. 9, an extended skeleton, 32 inches from the surface, had immediately with it a number of mingled bones, among which were two skulls. Near one of these four small arrowheads of flint were found, perhaps part of a deposit, the rest of which had been thrown out by the digger, though careful search with a sieve failed to yield additional ones.

Burial No. 13, a bunched burial including sixteen skulls, began 40 inches from the surface and continued on a downward slope, ending one foot deeper. The space occupied by this burial was about 8 feet by 5 feet, its thickness varying between one inch where long-bones only were present, to about 6 inches where crania were found.

Burial No. 15, a bunch, 3.5 feet down, with which were thirteen skulls. With this burial was a deposit consisting of nine small, barbed arrowheads of flint, some imperfect through former breakage, as were a large proportion of the projectile points from this mound. These particular arrowheads were not in a pile, as such deposits sometimes are, but were somewhat spread and called for careful search in the moist soil in which they lay singly.

Burial No. 17, a bunch with seven skulls, 5 feet deep, had twenty-six small arrowheads spread over a considerable area.

Burial No. 20, to which reference has been made, included twenty skulls and lay in a grave with rounded corners, 5 feet 1 inch by 5 feet 6 inches in area, the depth, as stated, being 2 feet 3 inches below the original surface of the mound and 6.5 feet below the present one. The bones in this grave were badly crushed, some retaining their shape in part, others being almost in powder. Even the skulls were flattened.

With this burial, mingled with the remnants of bones and distributed over the base of the grave-pit, were fifty-two small, flint arrowpoints, most of them serrated.

Three bunched burials, each with a single skull, had, respectively, an earthenware vessel, two undecorated, one without adornment except for series of three notches extending around the margin of the opening. These burials, with which had been placed the only earthenware vessels found by us in the mound, lay near together and presumably the same impulse prompted the placing of all three vessels.

Beyond the artifacts described, nothing was found by us with the burials, an unsatisfactory return, taking into consideration the nature of the site, which indicates occupancy by a secondary population for a considerable period.

In the field near the mounds was little evidence of former aboriginal occupancy, though a few arrowheads and knives were gathered from the surface, including an interesting knife of flint, about 2.9 inches in length, showing a curve on the end of the shank, the natural curve of the pebble from which the knife was made (Fig. 25).

We found this place to be the farthest north on Bayou Maçon (so far as our search extended) where arrowheads, as a rule, are small and barbed. Farther up the bayou projectile points are much larger, many having shoulders rather than barbs.



FIG. 25.—Knife of flint. Mott Place. (Full size.)

MOUNDS NEAR HOPE LANDING, MADISON PARISH.

About one-quarter mile in woods, in a westerly direction from Hope Landing, on property whose owner's name we were unable to learn, is a mound with rounded corners which are directed toward the cardinal points, somewhat of an exception, since, as we know, it is the sides of such mounds that usually are so oriented. This mound, which is square and near which is the usual depression filled with water, is 5.5 feet in height. Its diameter of base is 110 feet, the plateau varying between 60 and 70 feet. From the southeastern side a shoulder, nearly square, projects 70 feet, measured from the summit-plateau of the mound.

This mound, which was almost entirely of clay, yielded no sign of interment.

Between the mound just described and the bayou is a circular rise, about 75 feet in diameter and 18 inches in height. No evidence of the presence of artifacts or of bones was found in it.

MOUNDS ON THE MONTGOMERY PLACE, MADISON PARISH.

On the bank overlooking the water, on the Montgomery Place, of which Judge E. C. Montgomery, of Tallulah, La., is the owner, are two mounds. The larger, 5 feet in height, according to measurement from the outside, showed a distance of 5.5 feet from the summit to a dark basal line about 3 inches in thickness. This mound, hemispherical, having a diameter of 65 feet, without marked summit-plateau, looked what it proved to be, a veritable burial mound erected exclusively for mortuary purposes.

Seven trial-holes all reached burials, almost immediately, and in the removal of these so many other burials were encountered that the central part of the mound was largely dug out. The excavation, it is hardly necessary to say, was carefully refilled, leaving the mound as much a place of refuge in case of high water as it had been before our arrival.

The mound was made of a mixture of sand and clay. The burials, thirty-six in number, all very badly decayed, were present at all depths, some being just under the surface where apparently they had been disturbed by the plow some time in the past, though the mound is outside the cultivated part of the place at present. Other burials were at intermediate depths, and a number lay on the thin, dark stratum which marked the original surface of the ground.

The burials were all of the bunched variety, one, however, lying upon, and probably including, the remains of a skeleton which lay closely flexed on the right side.

Four of the burials had been greatly disturbed in cultivation, one of them so much so that but part of a single bone remained, not enough to distinguish whether or not it was human, but as a celt lay with it, presumably the bone had formed part of a human skeleton.

The remaining thirty-two burials included crania as follows:

With one skull	14
With two skulls	9
With three skulls	2
With four skulls	3
With five skulls	1
With six skulls	1
With seven skulls	1
With twenty-seven skulls	1

In one instance remains of teeth are included as a skull, though all other parts of the cranium had disappeared.

Few artifacts were found with the burials. With one was a small mass of galena (lead sulphide); with another, a celt of volcanic rock, 4 inches in length.



FIG. 26.—Clay supports for cooking-vessels. Montgomery Place. (Full size.)

With the great burial which included twenty-seven skulls and lay about centrally in the mound, though somewhat above the base, were a rude arrowhead, two other arrowheads from each of which a barb had been broken, and a graceful lancepoint, or large arrowhead. All these were not immediately together, but lay near the bones at short distances apart. The lancepoint or large arrowhead was in two fragments which were separated by about six inches.

With another burial was an arrowhead of flint (as were all arrowheads from this mound) from which a part had been broken.

In one part of the basal layer had been a circular fireplace about one foot

in depth and 32 inches in diameter. Within this fireplace was some charcoal and a number of objects of half-fired earthenware, rude, triangular pyramids in shape, from 3 to 4 inches in height. Twenty-five of these objects, which probably were supports for vessels while cooking was in progress, and do not belong to that type of clay objects found by us in various other places this season, were practically unbroken, while many others, in fragments, were also present in the fireplace, in which, however, no parts of pottery vessels were found.

These pyramids in no instance rest steadily on their bases, which are of irregular surface and often slightly convex. On examination, however, it is found that each of these supports has one side which is flat and on which it rests firmly. Consequently, the supports were so arranged, doubtless, that three or perhaps four of them, placed on their flat sides, could firmly support a vessel. In Fig. 26 are shown two of these objects, one on its base (on which it rested unsteadily) and one lying on the single side which is flat, the other sides being like the base, of uneven surface.

A few feet from the mound just described was a small rise which proved to be of raw clay and yielded no evidence of having served as a place of burial.

MOUNDS ON THE STEVENS PLACE, MADISON PARISH.

In open woods on the Stevens Place, belonging to the Ashley Land Co., of Tallulah, La., in sight of each other, are two mounds, the road which borders the bayou passing between them.

The larger, 4.5 feet in height, and 85 by 70 feet in diameters of base, proved on investigation to be of raw clay, with the exception of a small deposit of loam on the surface. No burials were found.

The second mound, somewhat smaller than the other, had been scooped out like a saucer and as it commanded the water its shape is probably a relic of the Civil War.

MOUNDS ON THE INSLEY PLACE, FRANKLIN PARISH.

The Insley Place, belonging to Mr. W. T. Insley, of Delhi, La., has a group of mounds bordering the water, though they are not in line, one being on the opposite side of a road which skirts the bayou, while the other three directly overlook the stream.

Mound A, the northernmost, has been lessened in extent by the road on one side and by the bayou on the other, not directly by the action of water on its side, as this place was not submerged in the great flood of 1912, but by the effect of the bayou undermining the bank below.

The mound, 4 feet in height, has a basal diameter of 65 feet through the part which still remains intact. Twelve trial-holes showed the mound to be of rich, brown loam and encountered two burials, both of the bunched variety, 30 inches and 18 inches down, respectively. The deeper burial had four skulls, two of which had belonged to children; the other, a single skull. No objects were found with either burial.

Apart from the bones were a good-sized arrowpoint of flint and three of those objects of earthenware of which a number were found throughout the season.

This mound was somewhat puzzling, as one would expect, with all the digging done, to have come upon more burials.

Mound *B*, a short distance below Mound *A*, has been quadrangular, but its shape has been so greatly altered by the making of the road, by wash of rain, and by the caving bank of the bayou, that it has no uniformity of outline. One diameter, that parallel with the road and with the river, and which no doubt gives some idea of the original size of the mound, is 215 feet. The altitude is 24 feet. Trial-holes came at once on raw clay; and great sections of the mound, exposed by wash, showed no signs of its use for burial purposes.

Mound *C*, a short distance below Mound *B*, is at present little more than a hump of compact clay.

Mound *D*, across the road, in a field, 10.5 feet in height, is fairly symmetrical. It is quadrangular, with an extensive summit-plateau in which, unfortunately, numbers of burials have been made in comparatively recent years. The mound does not exactly face the cardinal points, the longer side extending N. by W. and S. by E.; the shorter side, of course, E. by N. and W. by S. In the directions given, respectively, the diameters of base are 175 feet and 135 feet, and those of the summit-plateau, 140 feet and 70 feet.

The cultivated fields on this place gave no evidence of former aboriginal occupancy, nor was there any history there of the discovery of bones or of artifacts.

THE MOUND PLACE, MADISON PARISH.

The Mound Place is referred to here only to explain that what is considered a mound at this place is a tongue of the high land beginning on the opposite side of the bayou, and which, cut off by the stream, reappears as the so-called mound on the Mound Place. The few bits of pottery and occasional arrowheads picked up on the surface are relics of the time when this high ground was utilized by the aborigines.

MOUNDS ON THE LAKE PLACE, MADISON PARISH.

About 2.5 miles SE. from Delhi, but on the opposite side of Bayou Maçon, on the eastern bank of Joe's Bayou lake, in a field on property belonging to Mr. Michael Crudgington, who resides there, is a site including four mounds and several low rises and ridges.

Mound *A*, the farthest north on the lake, is a rectangular mound that has been plowed over and has suffered from wash and from trampling of cattle. Its sides about face the cardinal points. The mound is 10 feet in height; the basal diameters are 125 feet and 104 feet, and those of the summit-plateau 68 feet and 57 feet. As the mound had been planted over, but two trial-holes were dug, both showing raw, yellow clay.

Mound *B*, 80 paces S. by E. from Mound *A*, near the bank of the lake, has been greatly worn and trampled by stock. The mound, rectangular, the sides approximately facing the cardinal points, has a height of about 6.5 feet. The diameters of the base are 87 feet and 102 feet; those of the summit-plateau, 36 feet and 45 feet.

Ten trial-holes showed the mound to be of dark, yellow clay and came upon five burials so badly decayed that small parts only remained, at depths ranging between 6 inches and 2.5 feet. These burials were all above a dark layer about



FIG. 27. Vessel of earthenware. Lake Place. (Height 4.7 inches.)

3 feet down, probably caused by occupancy for a time before enlargement of the mound.

The burials consisted of three bunches of bones, each with two skulls; one with a single skull; and a skeleton at length on the back. About one foot in depth was a vessel shown in Fig. 27, which, broken when found, has since been cemented together and restored. As no bones were with this vessel, presumably the burial had disappeared through decay, or possibly its dissociation from remains was the result of disturbance.

Mound *C*, 46 paces ESE. from Mound *A*, about 3.5 feet in height and 60 feet in diameter, had been cultivated over and much worked down. Seven trial-holes showed the mound to be of dark, yellow clay, but came upon no sign of burials.

Mound *D*, 98 paces SE. by S. from Mound *C*, spread by cultivation, has a height of about 2.5 feet and a basal diameter of 85 feet. Seven trial-holes were unsuccessfully put down through light-colored clay of very unpromising appearance.

Digging in a part of the site produced a fragment of pottery showing red pigment on one side.

MOUND ON THE CROWROOT PLACE, MADISON PARISH.

This plantation, as to the name of which there seems to be some doubt, has, in view from the river, a mound about square, 6.5 feet in height and 140 feet in basal diameter. Its outline has suffered through cultivation on top and along the sides. Digging into this mound yielded no return in artifacts, nor any evidence of its having served as a place of burial.

MOUNDS ON THE RICHARDSON PLACE, EAST CARROLL PARISH.

About three-quarters of a mile SW. from the regular landing on the Richardson Place, which belongs to Mrs. John P. Richardson, of New Orleans, La., in sight from each other, are two mounds. One of these, 5.5 feet in height, of irregular basal outline, is about 95 feet in diameter. As this mound had been long in use by the Richardson family as a place of burial, and numerous tombstones are upon it, no investigation of it was attempted.

The second mound has served as a site for a house, the brick chimney of which was standing at the time of our visit. The mound has been greatly altered in outline in the course of years.

Digging showed the distance from the summit-plateau to a dark stratum of soil, the original surface of the ground, to be 3.5 feet, though a measurement of height from the outside did not indicate so much.

Eight trial-holes resulted in the discovery of one burial, which was very fragmentary and in the last stage of decay, the skull being represented by remains of the teeth only. In another hole, near together, were fragments of two bowls of inferior ware, each having incised line-decoration of inferior quality. No bones were found with these vessels, and presumably the burial that almost certainly once was with them, had decayed away. No doubt other burials in this mound had likewise completely disappeared, which would account for the ill-success of our trial-holes.

MOUND NEAR LOWER JACKSON LANDING, WEST CARROLL PARISH.

About one-quarter mile in a northerly direction from the lower landing on the Jackson Place is a mound with a circular base, 9 feet in height, the basal diameter being 115 feet.

This mound has been the cemetery of the Jackson family for more than sixty years, and, in addition, colored persons have been buried along the sides, so that digging on our part was out of the question, though we were kindly

permitted by Mr. S. T. Jackson, of Pioneer, La., to take measurements of the mound.

MOUNDS ON THE JACKSON PLACE, WEST CARROLL PARISH.

Forming part of the great chain of mounds that begins with the one just described at Lower Jackson Landing and extends several miles up along the river to within sight of the town of Floyd, is a group of mounds on the Jackson Place, from which, unless obscured by trees, the great mound at Poverty Point is visible.

On the Jackson Place, on property belonging to Mr. George W. Montgomery, of Tallulah, La., all in sight from the river bank, is this interesting group of six mounds, excluding various humps and small rises which are fairly numerous on the place. These mounds, to which letters have been assigned for clearness in description, all of which have been quadrangular with summit-plateaus, in some instances have suffered from wash and from a too close proximity of roads. Their relative positions may be seen on the plan (Fig. 28).

Mound *A*, the southernmost of the group, has upon it the house of the manager of the plantation. The height of this mound is 13.5 feet; the diameters of base are 177 feet N. and S. and 207 feet E. and W. Those of the summit-plateau respectively in the same directions are 96 feet and 135 feet.

Mound *B*, 15 feet in height, has been about square, save that a ridge, now in the main cut away by a road, has extended from the eastern side. The diameter of base is 122 feet; that of the summit-plateau, 50 feet.

Mound *C*, 9 feet high, has been in part cut away by a road on one side and eaten into by water on the opposite side. The basal diameter remaining intact is 82 feet, and that of the summit-plateau 26 feet.

Mound *D*, having an altitude of 14 feet, has basal diameters of 155 feet N. and S., and 138 feet E. and W. The summit-plateau, which is about square, is 65 feet across. Probably the mound was square also at one time, but the sides have suffered extension through wash of rain.

Mound *E*, 9 feet high, has diameters of base of 78 feet N. and S., and 69 feet E. and W. The diameters of the summit-plateau, in the same directions respectively, are 33 and 27 feet.

Mound *F*, which has a house upon it, has been plowed out of shape by continued cultivation and has suffered by wear and by wash. A representative diameter probably would be about 190 feet, 150 feet of which would be beneath the summit-plateau. The height is 6.5 feet. Long ridges extend from this mound, one toward the north, the other toward the south.

The usual ponds, caused by the removal of material for the mounds, are present at this place.

No digging was done in the mounds on which houses stood. All others, with these exceptions, were investigated, but not in as complete a way as would have been possible had the mounds been in a territory where their complete



FIG. 28.—Plan of mounds. Jackson Place

destruction would have been a matter of no importance. Several humps and rises also were dug into.

Mound *C* alone yielded burials to our investigation. In this mound nine trial-holes, put down from the summit-plateau, came upon human remains in seven instances. About 2 feet below the surface was a thin, dark layer of soil, which seemed to indicate a period of occupancy and a subsequent increase in the height of the mound. The bones found by us had been buried from the surface, none of the graves having cut through the layer in question in aboriginal times. One of the seven burials noted had been greatly scattered by an interment of comparatively recent date. With some of the scattered bones was a tubular bead of red jasper, .8 inch in length.

Two other burials were very fragmentary, one consisting of part of a single bone, perhaps a remnant of another disturbance. With this was what had been an effigy-pipe of coarse limestone or of phosphate rock, greatly disintegrated. A blow from a shovel completed the wreck. The remaining four burials had been extended on the back. These bones were so badly decayed that the form of burial was merely indicated by remnants.

With one of these burials were two bowls, both badly broken, one decorated with encircling, incised lines, the other with punctate markings.

The level ground at this place showed few signs of former aboriginal occupancy, judged by débris on the surface. Several arrowpoints of flint were found, including one small and serrated. Our agent informed us that when visiting this place the preceding summer, he picked up a "plummet" of hematite, and two others were acquired by us from a colored woman living on the place.

SITES ON POVERTY POINT, AND ON THE MOTLEY PLACE, WEST CARROLL PARISH.

Near the town of Floyd are two adjacent properties bordering the water, but well above reach of the highest flood, in all more than two thousand acres, farm-land and forest, respectively known as Poverty Point and the Motley Place, Poverty Point being the first reached by one ascending Bayou Maçon. These places, of great interest from an archæological point of view, were most courteously placed at the disposal of the Academy for investigation by Mrs. M. J. Redmond, of Floyd, La., whose property they are. To Mrs. Redmond and to Mr. M. C. Redmond, son of Mrs. Redmond, manager of these properties, the Academy wishes to express its sincere thanks. Mr. Redmond, a college graduate, and head of the School Board of West Carroll Parish, took a keen interest in the investigation and aided it in every way.

In the Smithsonian Report for 1872,¹ Prof. Samuel H. Lockett, of the Louisiana State University, Baton Rouge, La., writes:

"While prosecuting my topographical survey of Louisiana this summer, I visited, near Jackson's Ferry, 4 miles south of Floyd, on Bayou Maçon, some very remarkable Indian mounds. Six of these are within a mile of Mrs. Jackson's.

¹ Pages 429, 430.

Four of them are almost perfect; the other two are partly destroyed by the caving of the banks of the Bayou Maçon. They are connected with each other by a levee or narrow embankment of earth, making a nearly semicircular figure. There are two much larger mounds nearer to Floyd, one on Mr. Mabin's, and one on Mr. Motley's land. The latter must be between 20 and 30 feet in height. [What was formerly known as the Mabin Place is now the Poverty Point Plantation.]

"On all the sides of all of the mounds, and in their vicinity, are found great numbers of relics, such as human bones, arrowheads, 'plumb-bobs' very perfect in form and immense quantities of broken pottery. Many of the pieces of pottery are highly ornamented. From the quantity of pottery, I imagine there must have been a factory of this ware in this locality. Excavations would in all probability reveal some very valuable and interesting specimens and I think it should be done by one accustomed to searching for archaeological remains."

In the opening part of Professor Lockett's statement reference is made to the mounds on the Jackson Place, our description of which immediately precedes this.

We shall now consider the sites on Poverty Point and on the Motley Place, based on our own investigation.

At Poverty Point, in full view from the bayou, rising from the flat, cultivated land, is a huge, aboriginal earthwork that at first glance almost impresses even the trained observer as being not a mound, but a hill.

This mound, which for convenience we shall call Mound A, is in the shape of a ridge extending north and south, the upper, central part being narrow, as may be seen by the survey (Fig. 29) made at the time of our visit by Dr. M. G. Miller. The height of the mound is 70 feet, taken from the southern end, where conditions seemed most favorable for determination, there being at that place no evidence of the depressions and ridges which were present elsewhere about the mound.

From the central part of the eastern side of the mound extends a platform directed almost due east, the outline of which has been greatly impaired by wash of rain. This platform is connected with the summit of the ridge by a causeway, shown in the plan. The basal diameter of Mound A, north and south, is 680 feet. East and west, including the platform, it is 690 feet.

To dig into so vast a mound as this seemed almost like the proverbial search for a needle in a haystack; nevertheless, trial-holes were put down on the crest of the mound, coming at once to raw clay, and also superficially in the platform, where burials, however, had such ever been there, evidently had long since been washed away, leaving compact, yellow clay on the surface.

This great mound (A) forms part of a group of six which at one time may have been in the shape of a rude circle or of an irregular ellipse. At the present time, however, rain has so eroded the high area that rises above the bayou that the only representative of the figure (if there ever was one), between north and

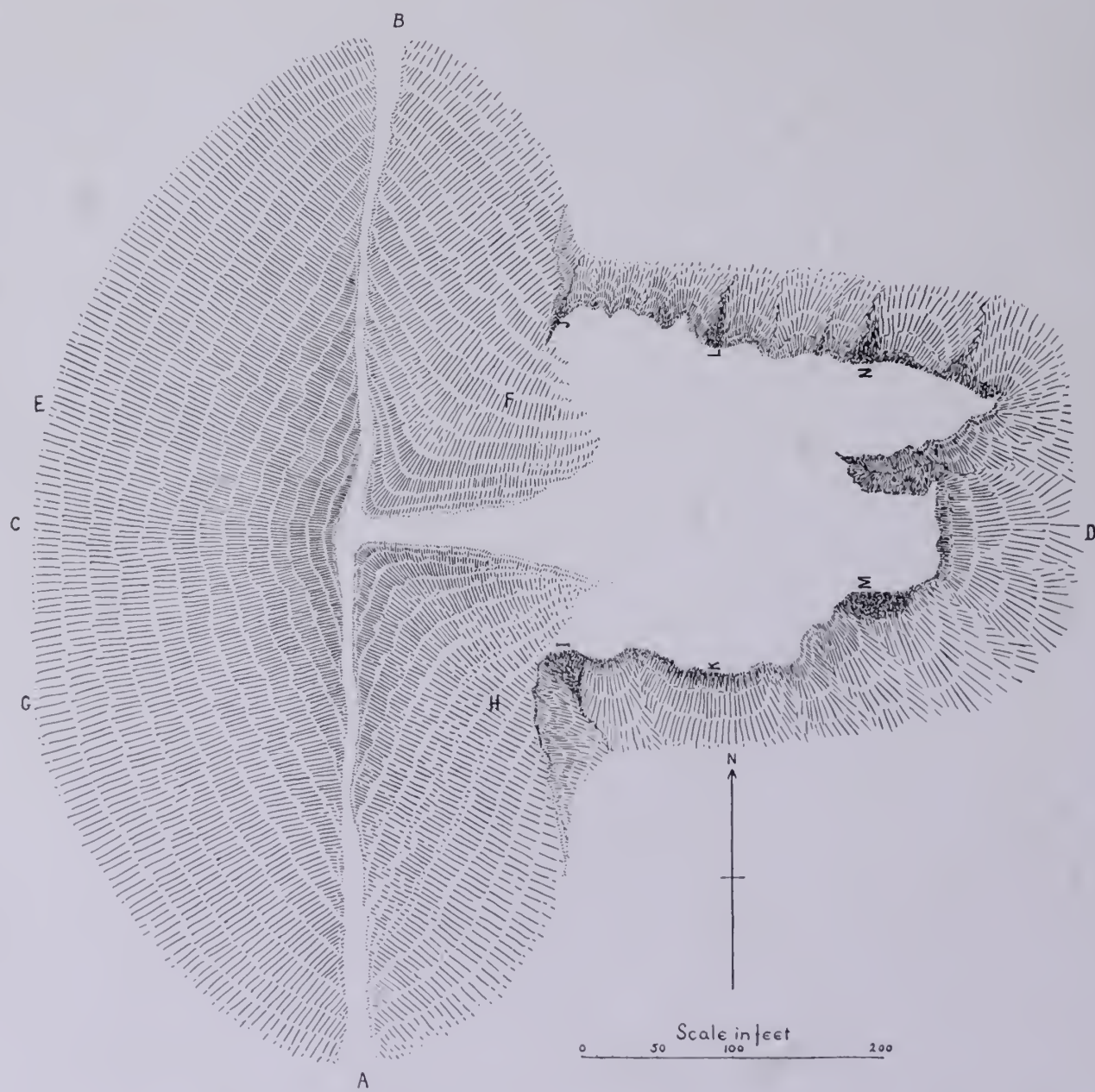
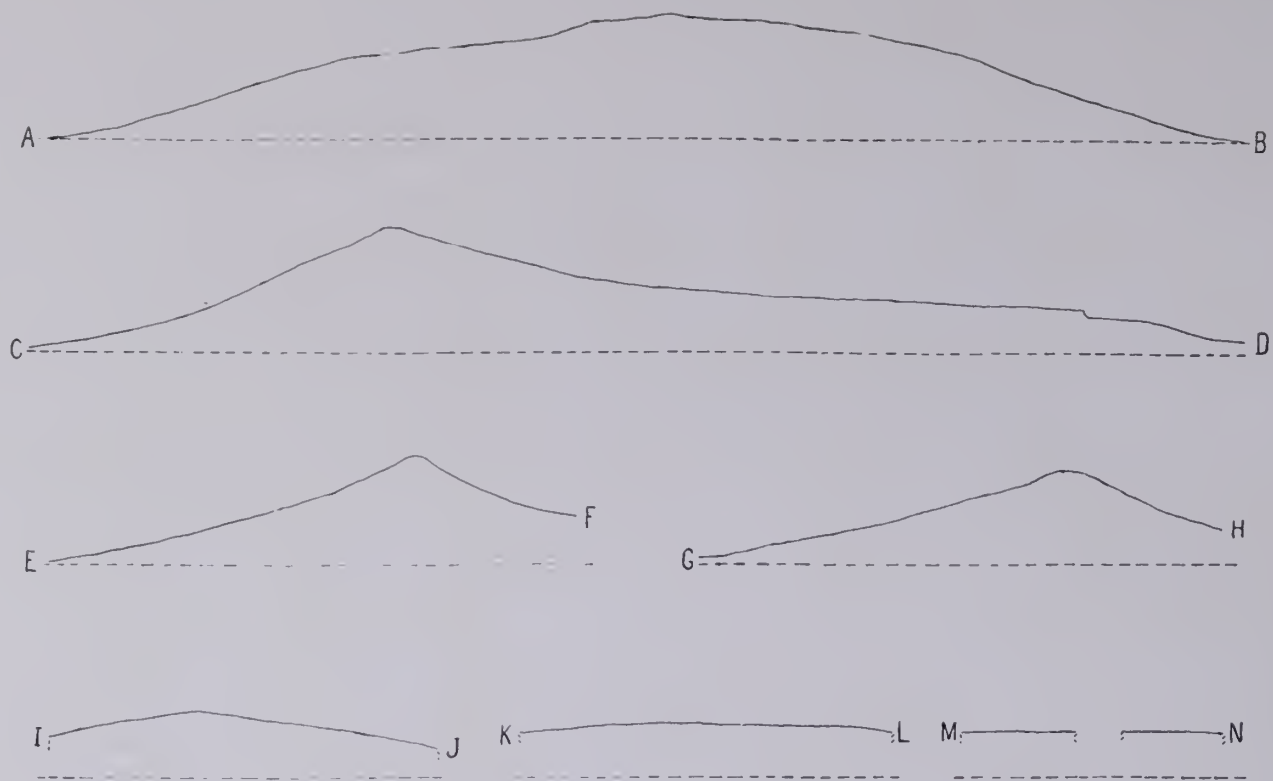


FIG. 29.—Plan. Mound A. Poverty Point Plantation.

east, is a mere remnant of a mound (*E*), about 6 feet in height, part of which has fallen into the bayou and another portion of which has been destroyed by a road. Incidentally we will say here that careful digging into this mound showed it to be entirely of mixed soil down to a base about 6 feet below the surface. In this soil was midden débris, here and there, but no sign of human remains.

Mound *B*, 186 yards¹ S. by E. from Mound *A*, 9 feet in height, has been under cultivation, and owing to wash of rain on plowed ground it has been greatly eroded and is, in consequence, of very irregular outline. Presumably it has been about square with a great summit-plateau. Its diameter of base is about 300 feet. This mound is of bright, yellow clay.

Mound *C*, 500 yards N. by E. from Mound *B*, is a well-preserved mound, 7 feet in height, in the form of a truncated cone, the diameter of base being 90 feet, that of the summit-plateau, 26 feet. This mound has every appearance of having served for burials in aboriginal times, being steep and composed of dark soil. Unfortunately, it has been honeycombed by burials in recent years.

Mound *D*, 150 yards E. by N. from Mound *C*, is slightly more than 4 feet in height. Its irregularly circular base is slightly more than 100 feet across. This mound, which overlooks the bayou, has served as a cemetery in the past and grave-stones enclosed by an iron railing are upon its plateau.

Mound *E* has been described.

Mound *F* is 430 yards N. from Mound *A*, in woods bordering a field in the lower part of the Motley Place, the other mounds described being on the Poverty Point Plantation. This symmetrical mound, 21 feet 6 inches in height and 195 feet in diameter of base, is conical, with almost no flattening at the summit. It is evident from its shape that whatever the purpose for its erection was, it cannot have been intended for a domiciliary mound. Seemingly it is composed of raw, yellow clay, and probably is without superficial burials. It may have been erected over some personage of note. Unfortunately, neither our time nor our force of men was sufficient to undertake the demolition of a mound like this.

These are the mounds (all of which but one we dug into to some extent) at present forming the group on or near the Poverty Point Plantation. Another mound on the Motley Place will be described in due course.

It is entirely possible that Professor Lockett regarded as hills the huge mound on the Poverty Point Plantation and the great mound on the Motley Place, yet to be described, an error which could easily be made by an untrained observer, and that the figures as to height given by him as to a mound on the Motley Place refer to the mound on that place already described by us.

About these mounds and between them is cultivated ground on which are numerous low ridges on which, in profusion, lay at the time of our visit, aboriginal artifacts and débris, mainly pebbles; fragments and flakes of flint; arrowpoints, spearheads, and knives, of the same material, some entire; several celts; "plum-

¹ The distances between these mounds were paced.

ments" of hematite; almost innumerable small objects of earthenware, broken and whole, to be described later; immense quantities of what is known as gravel, by the inhabitants. This material which, to some extent, has the appearance of gravel and small pebbles, and might seem to be such at first sight, proves on closer inspection to be baked clay from fireplaces of aboriginal dwelling-sites, which constant plowing has reduced to small fragments. No traces of human bones were anywhere visible on the surface.

One feature in connection with these sites impressed us greatly. Almost no fragments of earthenware vessels were in evidence. With the exception of one place in which eight bits of pottery were found, sherds were practically absent not only from the surface but from the soil thrown out in digging. It is difficult to surmise what took the place of pottery during the long time this site was inhabited; possibly vessels of wood were used. Two or three fragments of soapstone pots were found, but had such vessels been in general use, presumably more parts of them would have been discovered.

Professor Lockett's statement as to the great abundance of fragments of pottery, it must be remembered, was made in a general way, applying to three sites, and, if exact, probably had reference to the Jackson Place or to the Motley Place; for had pottery fragments been abundant at the Poverty Point Plantation in his time, it is impossible that the sherds alone should have disappeared from there, and that the great variety of other débris should still remain on the surface, as it has done.

From the surface at this place came more than two hundred entire knives, arrowpoints, and spearheads, of flint, of which thirty-one (selected by us from a much larger number) were acquired from a colored man who cultivated part of the property. No lancehead exceeded 4.25 inches in length, though fragments found in the fields indicated that some of the points must have had a length of 8 or 9 inches. A few spearheads and projectile points were found fashioned with but a single barb, such as those which have been described as coming from Catahoula Parish, La., and elsewhere. Certain of the arrowpoints show curvature on the end of the stem, which on examination proves to be the curve of the surface of the pebbles from which the arrowheads were made. Secondary work on a few of the points was noted, where apparently broken points had been resharpened or the side of a broken arrowhead had been chipped possibly to serve as a knife.

The workmanship on these implements is not above the average; serration is almost absent. The small, delicate, barbed arrowheads found in numbers farther down Bayou Maçon are represented at this place by a single example.

Of four small celts from the surface of this plantation (which were given to Mr. Redmond) one shows marked excellence of workmanship, being slender and graceful; one is of about average appearance; and two are of rude manufacture.

That the aborigines who inhabited this great site had considerable skill in working of hard stone, however, is shown by a bead of red jasper (obtained by



FIG. 30.—“Plummets” of hematite. Poverty Point Plantation. (Full size.)

us from the colored man from whom the arrowheads were acquired), unless the bead was an importation. This bead, 2.6 inches in length, with a diameter of .36 inch, has an evenly placed perforation of only .14 to .16 inch diameter.

This large bead of jasper is, however, not the record one as to size. In the Louisiana State Museum, at New Orleans, we noticed a jasper bead the measurements of which kindly have been furnished us by Mr. Robert Glenk, B.S., Ph.C., Curator of the Museum: length, 3.3 inches; diameter, .44 inch; diameter of opening, .125 inch. The bead, Mr. Glenk informs us, came from St. Landry Parish, La.

Among the aboriginal dwellers on the Poverty Point site, what are known as "plummets"¹ of hematite were greatly in vogue. Persons now living on the site tell of quantities of these objects, which they call "plumb-bobs," that have been found in the course of cultivation of the land, and the colored man from whom the arrowheads and the bead were obtained spoke of profits derived by him from the sale of these "plumb-bobs" to visitors, and displayed a number which, through partial breakage, he had not been able to dispose of.

There were found by us eleven hematite "plummets" (Fig. 30), ten on the surface and one in the course of the digging. They varied in length between 3.5 inches and .8 inch, some with perforations, some with grooves for suspension, one having a semiperforation. Some are rude, without regularity of outline, hardly more than masses of material on which but little work has been done. Over the surface were many fragments belonging to "plummets."

Several small balls of hematite were picked up, all of somewhat irregular outline.

From the surface also came an interesting little figurine of earthenware, representing a female (Fig. 31).

The objects of baked clay which were discovered in such numbers at this place (sixty-seven² entire ones being obtained), and which resemble most of those we found this season in and sometimes on the surface of various sites in Louisiana, south of Poverty Point, are of a class hitherto undescribed, so far as we can learn. A selection from those found at Poverty Point, embracing all the various forms obtained there, is shown in Plate II.

All these objects from Poverty Point lay on the surface with a few excep-

¹ As to "plummets" and objects of hematite, of aboriginal make, in general, see: W. K. Moorehead, "Hematite Implements of the United States," Bulletin VI, Department of Archaeology, Phillips Academy, Andover, Mass.

² In addition to a selection from these, which has been placed on exhibition at the Academy of Natural Sciences of Philadelphia, others were sent to the following: United States National Museum, Washington, D. C.; Peabody Museum, Cambridge, Mass.; Yale University Museum, New Haven, Conn.; American Museum of Natural History, New York City; Field Museum of Natural History, Chicago, Ill.; Department of Archaeology, Phillips Academy, Andover, Mass.; Museum of Archaeology and Ethnography, Cambridge, England.



FIG. 31.—Figurine of clay. Poverty Point Plantation. (Full size.)



M. L. BAKER, '00.

SITE AT POVERTY POINT, OBJECTS OF EARTHENWARE. (FULL SIZE.)

tions which were dug up singly in midden material, those from the surface being also with the débris of fireplaces locally known as "gravel," above referred to, or, at all events, on ground somewhat higher than the surrounding level and darker than the other ground, which evidently had been places of abode.

By consulting this report it will be noted that other objects of this class, found elsewhere by us this season, lay on the surface or in midden débris, with one exception (the Schwing place) where a deposit of them was found near a burial. As the deposit of the objects in this way was so exceptional, it is hardly likely they were ceremonially connected with burials, but presumably were employed in the general life of the people. A single deposit proves little. In the great Rose Mound on St. Francis river, Arkansas, we found with a burial a considerable deposit of cylindrical, earthenware objects such as were used by the aborigines in some regions as supports for vessels while cooking was in progress; yet nowhere else was such a deposit found by us, though numbers of the supports were discovered in other sites among midden débris.

We are greatly indebted to Mr. Charles C. Willoughby, of Peabody Museum, Cambridge, Mass., who has taken much interest in the probable use made of these clay objects, for his suggestions on the subject, which follow, and for a photograph of the clay objects used by the Paiute Indians, which is reproduced here. Mr. Willoughby writes:

"Regarding the three types of burnt clay objects of which you sent me drawings, the first form, that of the double cone, is the only one the use of which is at all clear to me. There are in our museum two similar specimens (Fig. 32)



FIG. 32. —Clay cones. Paiute Indians, southern Utah. Collected by Edward Palmer, 1875. (Full size.)

of clay, obtained from the Paiute Indians by Dr. Edward Palmer in 1875 and called by him gambling cones. These, of course, were used in the well known and widely distributed 'hand game' which is commonly played with two bones, one of them being marked. One of the double cones is plain, the other has a series of dots arranged in a spiral on one of its sides. The game, as you know, consists in telling in which of the opponent's hands the unmarked cone is concealed. It has occurred to me that the double cones found by you might have been used in this game. One of your specimens [see Fig. 15] has a groove which may have served to distinguish it from its fellow, or one of a pair may have been marked with paint, all traces of which have disappeared.

"It is also possible that they may have been used in slings, as the form is similar to the well-wrought sling stone of Polynesia. You will recall that Professor Holmes obtained from the Stockton mounds of southern California, clay pellets of various forms some of which he thought might have been used in slings. One of these, which resembles somewhat your second form, is illustrated on plate 27 of the Report of the U. S. National Museum for 1900.

"As to the second form, the lump of clay with six or more depressions, it remotely suggests the worked astragalus of the deer, such as was probably used for gaming.

"As to the third form, the grooved cylinder, I have no suggestions to offer as to its possible use."

In a later communication Mr. Willoughby writes: "I have come across a picture and notice of clay balls from Missouri: see Louis Houck's 'History of Missouri,' pp. 45, 46.

"I also find that there are two or three clay double cones like yours in the Museum of Peabody Academy of Science, Salem, Mass. They are from the bed of Lake Pontchartrain, La., if I am not mistaken."

The deposit of clay objects found by us in a mound near the Schwing Place, and described in this report, was made up of two varieties, namely, double cones and similar forms having longitudinal furrows in addition (see Fig. 2).

It has occurred to us that these objects, if used in the hand-game, were employed by making a double cone and one with furrows constitute a pair, the required difference between the two being attained in this way.

Mr. Stewart Culin, author of "Games of the North American Indians,"¹ in reply to a request for his views as to the clay objects in question, kindly has sent the following statement: "I am unable to form an opinion as to the probable use of the clay objects. They may have been used in games, but from any knowledge of existing games I have no assurance that they were thus employed."

Persistent digging was done at Poverty Point into the various dwelling sites in the fields, to which we have referred, but though soil indicating deposit through long habitation was gone through to considerable depths, and various relics were found, including a number of the small, earthenware objects described and the "plummet" of hematite referred to, no skeletal remains were encountered. Presumably, burials had been made apart from the places of abode or had been destroyed during the long-continued cultivation of the place, especially if buried more or less superficially. It was, of course, impossible to make a thorough examination of so great a site as the one under description, but it is very unlikely, had burials been in the places investigated, we could have failed to find some in the great amount of digging that was done. It is significant, too, that no history of the discovery of human bones is to be had from persons living on the place or connected with it. The bones seen by Professor Lockett at the time of his visit more than forty years ago, may have been on the other sites referred to by

¹ 24th An. Rep. Bur. Am. Ethn.

him or may long ago have disappeared from the surface, since fragments of bones are far more subject to disintegration and to decay than are pottery fragments.

A description has been given of Mound *F* on the lower part of the Motley Place which, as stated, is adjacent to, and above, the Poverty Point Plantation.

About one mile N. by E. from Mound *F*, across part of the cultivated portion of the Motley Place and in view from Mound *F*, is another mound, 51 feet in height, and somewhat resembling the great mound on Poverty Point, as it is in the form of a ridge, but in this instance extending E. and W. It presents a steep side to the north. From the southern side of the mound, below the upper part



FIG. 33.—Implement of flint. Motley Place.
(Full size.)

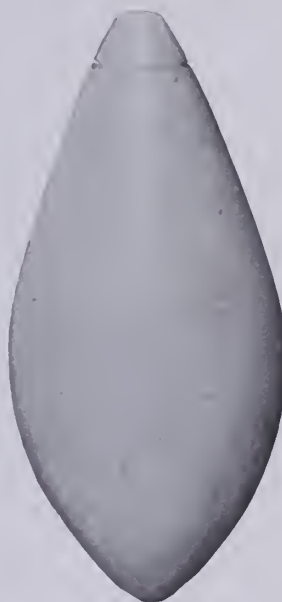


FIG. 34.—Charm-stone of chalcedony. Motley Place.
(Full size.)

of the ridge, is an extension sloping downward to the south until it reaches a level terrace 50 feet in width and somewhat less than 6 feet in height. This terrace, very symmetrical, slopes to eastward and westward, and seemingly joins the general level at the extremities.

In places in the mound are deep gullies wrought by wash of rain over clay insufficiently protected by roots of trees, which have impaired the symmetry of parts of the mound. Nevertheless, this superb earthwork, on its terrace facing the plain to the south, has the appearance of a great temple, and such probably it was.

So nearly as can be determined, the diameters of the mound at the present time are: N. and S., 400 feet (including the extension but not the terrace); E. and W., 560 feet.

An examination of the gullies which have laid bare large sections of the mound and do more to aid examination of the earthwork than a long period of

digging could do, showed no sign of mixed soil or of the presence of artifacts or bones.

A large part of the cultivated portion of the Motley Place has been used for the production of rice, and if any aboriginal *débris* lay on the surface in the past it was not evident at the time of our visit, when the fields, no doubt, were covered to some extent with sediment from water introduced for the cultivation of this plant.

A field, however, forming part of this great property, let to a colored man named James Green, had on the surface occasional fragments of earthenware, bits of flint, and a few arrow points, ten of which, unbroken, were gathered by the party. One of these, of somewhat unusual shape, is shown in Fig. 33.

We were informed by the tenant of this field that he frequently found objects of interest while plowing, and we obtained from him a "plummet" of hematite, 2.5 inches in length, grooved for suspension, and a superb charm-stone of chalcedony, shown in Fig. 34, wrought with the greatest symmetry, elongate-ovoid in form. We were informed by the tenant, from whom this was acquired, that it was the property of his little daughter and that she, at Easter time, when the custom to "pick" eggs obtains (namely to tap eggs together, the egg first showing a break becoming the property of the owner of the unbroken egg), was accustomed to color the ornament and to conceal within her hand that portion which is narrow and grooved and to "pick" the other end against eggs belonging to her playmates. Our informant added that the child had been a constant winner.

No trace of coloring, however, now mars the milk-white purity of the stone.

BAYOU D'ARBONNE, LOUISIANA.

Bayou D'Arbonne, rising in northwestern Louisiana, flows easterly to its union with Ouachita river, a short distance above the city of Monroe, La. This stream is navigable for about 32 miles up to its union with Bayou Corney, while Corney is open for navigation about 8 miles farther, to Stein Bluff, from which point our agent, Capt. W. D. Platt, preceded us in a search to the union with Ouachita river.

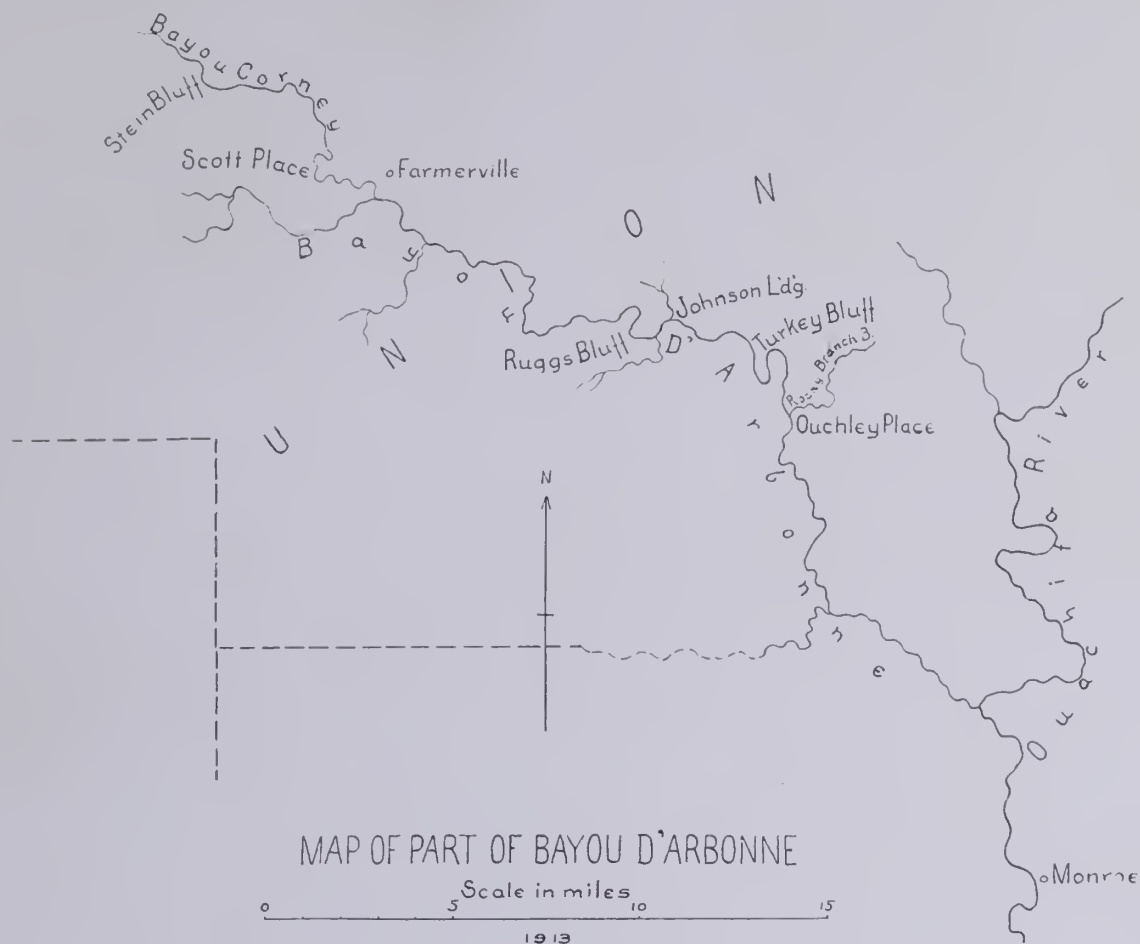
Our investigation covered Bayou D'Arbonne to a point some miles above its union with Corney and included three or four miles of Bayou Corney to the Scott Place, above which our agent had found no aboriginal sites.

Most of the lower 20 miles of Bayou D'Arbonne is low-lying and was under water at the time of our visit. Our agent found no aboriginal sites on this part of the Bayou.

SITES INVESTIGATED.

On the Ouchley Place, Union Parish.
Near Turkey Bluff, Union Parish.
Near Johnson Landing, Union Parish.

Near Ruggs Bluff, Union Parish.
On the Scott Place, Union Parish.



SITE ON THE OUCHLEY PLACE, UNION PARISH.

The Ouchley Place, belonging to Mr. R. Ouchley, who lives upon it, is about one-half mile back from Bayou d'Arbonne, at a place where it is joined by Rocky Branch bayou.

Part of the Ouchley Place is a large field along the side of which nearest the bayou are a number of humps and rises. Some of these were dug into by us unsuccessfully, the soil being without evidence of having served as dwelling-sites to any great extent. On the surface of these slight elevations, with one exception, was midden débris in small quantities, and it is probable the sites had served as places of abode for short periods or that the midden material had been washed away.

One small hump had, superficially, considerable débris, including a number of small, barbed arrowpoints of flint. This rise was dug into with especial care, and black soil showing former occupancy was found to a depth of about one foot. No burials were encountered.

SITE NEAR TURKEY BLUFF, UNION PARISH.

Immediately back of the landing at Turkey Bluff are low hills. On level ground, at some elevation above the bayou and in sight from it, is a field forming part of a place belonging to Mr. S. J. Wall, of Wall Lake, La. This field, fallow at the time of our visit, had on the surface slight traces of former occupancy by aborigines and has the reputation of having been a camping-site for them. The made-ground, however, presumably had disappeared through cultivation and through wash, taking with it any burials that may have been present.

SITE NEAR JOHNSON LANDING, UNION PARISH.

About one-quarter mile in from Johnson Landing is the property of Mr. J. S. Meeks, resident upon it. On a cultivated field forming part of the place was some débris, among which were found several arrowpoints of flint. Mr. Meeks informed us that thirty years ago he had plowed up numerous human skulls in a part of this field, but that for a considerable time he had found no bones of any kind.

A number of trial-holes put down at the spot designated by Mr. Meeks came upon no sign of burials, though a bicave of fine-grained sandstone, about 2 inches in diameter, was unearthed. Presumably at this place all burials had disappeared in the course of cultivation.

SITE NEAR RUGGS BLUFF, UNION PARISH.

A site near Ruggs Bluff, consisting of a field on which were hammer-stones, bits of flint, and a few small fragments of pottery, was dug into by us but found to have lost by cultivation any superficial soil and burials it formerly may have had.

SITE ON THE SCOTT PLACE, UNION PARISH.

The Scott Place, on Bayou Corney, which, as stated, is an affluent of Bayou D'Arbonne, belongs to Mr. J. D. Baughman, of Farmerville, La. On this place, in full view from the stream, on ground far above the reach of the water, is a well-preserved, quadrangular mound, with angles slightly rounded by erosion. This mound, somewhat more than 11 feet in height, practically square, has a basal diameter of about 110 feet. Sixty feet, approximately, is the diameter of the summit-plateau. The four corners of this mound are not exactly directed toward the cardinal points, though they are within a few degrees of being so, the eastern corner, for instance, being somewhat south of east, about the direction the aborigines would obtain from the sun in winter.

In the hope that superficial burials had been made in this mound, which evidently had been domiciliary, trial-holes were sunk over the summit-plateau, but almost at once reached hard, raw clay without any admixture of midden material.

In sight from the mound just described, in a southerly direction from it, immediately at the farther side of the public road, is a mound with a flat top.

somewhat more than 4 feet in height, measured from the western side, though from the eastern side, the mound being on a slope, the height seems considerably greater. The base of the mound, irregularly circular, is about 75 feet in diameter; the summit-plateau is 32 feet across.

Seven trial-holes dug from the summit-plateau of the mound showed it to be of raw clay and sand without admixture of dark material indicating the presence of burials. These holes, carried below the base-line which was at a depth of from 6.5 to 7 feet, intersected no pits of any kind, nor was there any sign of a central pit extending below the base.

Five feet below the central part of the summit-plateau was a basin-shaped fireplace, 3 feet 8 inches across at the top and 21 inches deep. Filling the lower part of the fireplace was a layer of ashes and burnt material 9 inches in thickness.

In sight from the principal mound, in a southwesterly direction from it, are two other mounds, while a third lies a short distance to the westward. These mounds, irregularly circular as to the bases, the diameter of each of which is about 50 feet, are respectively 2 feet 2 inches, 1 foot, and 2 feet 3 inches in height. They are composed of raw, yellow clay without any indication of use for burial, as was shown by many trial-holes sunk through them to sand on which they rest.

South of the mound is a great field, fallow at the time of our visit, on which, here and there, were relics of aboriginal life, including two arrowheads of flint. Doubtless the grass covered much that could have been apparent on plowed land, and possibly through the presence of vegetation an aboriginal cemetery was concealed.

SALINE RIVER. ARKANSAS.

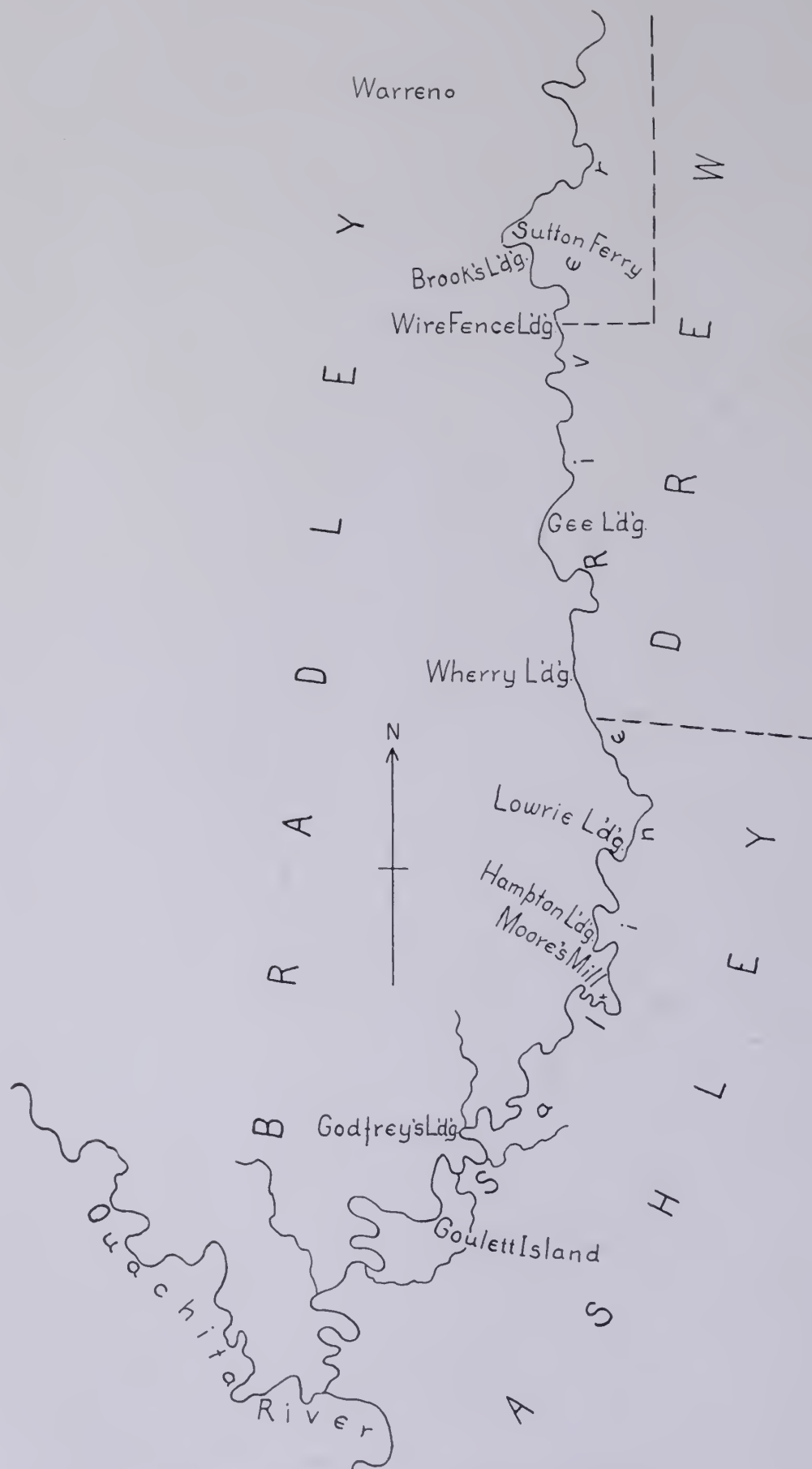
Saline river has its source in central Arkansas, not far west of Little Rock, and pursues a southeasterly course to its union with Ouachita river, about a dozen miles above the Louisiana border.

Navigation on this stream is blocked by a bridge, 58 miles by water above its mouth. The territory from this bridge to the river's junction with the Ouachita was searched by Capt. W. D. Platt prior to our coming, who found great difficulty in obtaining information as to mounds, owing to the sparse population along the banks of the stream.

The river was investigated by us for a distance of 50 miles, as the river runs, no aboriginal sites of interest having been discovered farther north.

Along that part of Saline river investigated by us no burials were found in cemeteries, only in mounds, and all mounds found by us along this stream were low and without symmetry—mere irregular rises of the ground, none apparently having been otherwise in earlier times.

The custom of placing artifacts with the dead evidently was not practised along that part of Saline river investigated by us, with the exception of pottery, and that to a very limited extent. This pottery is of inferior ware and without polish, though, as might be expected of a region lying south of Arkansas river,



MAP OF PART OF SALINE RIVER

a considerable proportion of the vessels bear decoration. This decoration in nearly every case is rude. The use of pigment (red) in the decoration of pottery was very limited. No polychrome combination was found, nor was such expected south of Arkansas river.

In form the vessels are ordinary. The water-bottle was met with but once. The ware, while soft and coarse, is not thick, and the vessels are fairly symmetrical as a rule. In a word, this pottery belongs to the class found in the lower Mississippi region, but is of an inferior grade in that class.

SITES INVESTIGATED.

On Goulett Island, Ashley County.
Near Godfrey's Landing, Bradley County.
Near Moore's Mill, Bradley County.
At Hampton Landing, Bradley County.
Near Lowrie Landing, Bradley County.
Near Wherry Landing, Bradley County.
Near Wire Fence Landing, Bradley County.
Near Brooks Landing, Bradley County.
Near Sutton Ferry, Bradley County.

SITE ON GOULETT ISLAND, ASHLEY COUNTY.

On Goulett Island is a site with a number of small mounds of irregular outline, some in sight from the landing and all near one another, on property under the management of Mr. W. J. Wright, who resides about three miles farther up the river.

One of these mounds, largely of clay, is 2 feet in height and 50 feet across its irregularly circular base. Of six trial-holes three came to undisturbed, yellow clay at a depth indicated by the height of the mound as determined by us from the outside.

Three holes, however, extended through disturbed soil, evidently graves, to a greater depth, the deepest being 4 feet 4 inches.

One of these trial-holes, about centrally placed in the mound, came upon a fragment of human skull at a depth of 2.5 feet, and in another of the holes was a small fragment of pottery, of excellent ware, bearing deep and evenly-cut, lined decoration. An arrow head or a knife, of flint, and a small deposit of pebbles also came from the mound.

Another mound of the group, also circular, having a greater admixture of sand than was present in the preceding mound, is somewhat less than 2 feet in height and 40 feet in diameter. Undisturbed, yellow sand was reached at a depth about equal to the height of the mound, without the discovery of bone or of artifact.

Near these two mounds is a level space covered with rich, black loam to a depth of from 12 to 18 inches, containing midden débris here and there. No human bones were found in it.

A little farther north is another mound which probably had been about circular, but though in thin woods, like this entire site, it most likely had been under cultivation at one time and had been plowed down considerably and extended. Its height is between 2 and 3 feet; its diameter, about 80 feet. It is composed of clay with an admixture of sand.



FIG. 35. —Vessel of earthenware. Goulett Island. (Height 5.2 inches.)

Twelve trial-holes sunk into what was probably the original mound, came upon human remains in many places, sometimes in two or three parts of a single hole. The burials were all near the surface, the deepest being but one foot down, while the rest were from 4 to 8 inches in depth.

As may be supposed, most of the burials had been much disturbed by the plow; six, however, were unearthened nearly intact, although all were badly decayed. These six skeletons lay extended on the back; two heading S.; three, S. by W.; one, SSW.

At the right of the skull of one skeleton was a pot of inferior ware, having by

way of decoration incised, upright lines around the neck. The body, which is without decoration, is hemispherical, the neck upright, the rim flaring.

Near the skull of a badly disturbed skeleton was that part of a vessel which plowing had left. On four sides of the body are double, upright, beaded fillets, the most of the surface being covered with a design of trailed lines (Fig. 35). This vessel has been restored to some extent.

Near fragments of bones lay a rude knife of chert.

Another mound, about 3 feet in height and 80 feet by 90 feet in diameter, proved to be of raw clay with no sign of interments.

SITE NEAR GODFREY'S LANDING, BRADLEY COUNTY.

About one-quarter mile in a SW. direction from Godfrey's Landing is a small clearing in woods, which has been under cultivation for a considerable period. It is higher than much of the surrounding country, and we were told it was not submerged in the great flood of 1912. This field forms part of a property under management of Mr. W. G. Wright, who resides on the place.

The field to a depth of about 18 inches is covered with a black, sandy loam which evidently had received its color through aboriginal habitation. Scattered over the surface were fragments of human bones, bits of pottery of inferior ware and rude decoration, parts of mussel-shells, and three arrowheads of flint, two small and barbed, one elongated without barbs.

Considerable digging by us in this field showed burials to have been comparatively numerous there. Many, however, had been disturbed, by cultivation in most cases, occasionally by the rooting of hogs.

The burials lay none deeper than 18 inches, sometimes in the dark loam, sometimes on the undisturbed, yellow sand which underlay the loam.

In addition to the disturbed burials, five others were unearthed, complete though badly decayed, four of adults, one of an adolescent, all extended at full length on the back, the heads variously directed. No artifact lay with any burial at this place.

SITE NEAR MOORE'S MILL, BRADLEY COUNTY.

At a place called Moore's Mill, probably through the former presence of a saw-mill there, and which is known also as the Jack Fogle Place, after the name of a former owner, is a property belonging to Mr. Samuel Clanton, who lives near Johnsville, Ark.

On this property, which is immediately on the river bank, are three mounds, two within a large cultivated field and one just outside.

Over the field in places is much dwelling-site debris, including many bits of pottery of rather less than average excellence.

There were collected by the party: three small celts, given away before identification as to their material; many delicate, barbed arrowheads of flint; one barbless point of the same material, nearly three inches in length; a flint knife with rounded cutting edge.

Toward the NE. end of the cultivated field was a rise above the level of the surrounding territory, having a maximum height of 2 feet. The diameter was about 70 feet. It was apparent, however, that the height of the mound had been impaired through cultivation and that the consequent spreading of material had added to the original diameter.

Over the surface was much midden débris, including a fragment of pottery on which was red pigment, and bits of human bones, among which was part of a lower jaw.

With the aid of converging trenches it was determined that a space about 27 feet by 43 feet contained what burials remained, most of which, it may be said, were found in the NE. part of the mound where, according to a former owner of the place, burials had been plowed up by him.

The space described was completely dug out by us to a depth of from 2 to 3 feet, where undisturbed material of light color was encountered. The mound itself was mainly a brown mixture of sand and clay, the sand predominating.

As the digging progressed, it became evident that the mound, when higher, had contained numerous burials, but that many of these, if not most of them, had been plowed away wholly or in part. Many parts of skeletons through which the plow had gone were encountered, and scattered bones also were numerous. The deepest burial was 14 inches down.

Excluding recent disturbances and several aboriginal ones made by intersection of graves, seven burials were encountered, all of adults and all extended on the back, except one which lay partly flexed on the right side, the head directed ENE. The other burials headed as follows: NE., 3; ENE., 2; SW., 1.

With the burials were five vessels of inferior ware, broken and whole, and two vessels, similar to the others in quality, were met with apart from human remains.

Most of the vessels exhibit some attempt at decoration, scanty as a rule and poorly executed. One pot has incised lines around the neck and a beaded margin; another has a scalloped neck and series of incised, festooned lines on the upper part of the body. Apart from bones was a small celt evidently smoothed from a pebble.

In the northern corner of the field is a mound or a ridge of irregular shape and height. The maximum height slightly exceeds 2 feet; the greatest breadth is 100 feet. The length of the ridge, which evidently increased under occupancy, is 740 feet approximately. Near each end of it is a kind of hump, that nearer the river having been the cemetery of the Fogle family, we were told by a former owner of the place.

Holes sunk in the other hump passed through the dark, mixed material of the dwelling-site to hard clay at a depth of about one foot. In other parts of the ridge the mixed soil is deeper, sometimes reaching a depth of about 2 feet. Fragments of human bones were on the surface at one place, and there we came upon a badly decayed skeleton partly flexed on the right side, the head directed to the east.

Near the ridge are two deposits of mussel-shells, mostly broken—refuse from aboriginal meals.

Outside the fence, near the river, is a small mound having a large depression in the central part where, presumably, some excavator had been at work.

This place, no doubt, had been a site of some importance, but long-continued cultivation presumably had destroyed most of the burials that formerly had been there.

SITE AT HAMPTON LANDING, BRADLEY COUNTY.

Immediately at Hampton Landing is cleared ground, higher than most of the surrounding country, belonging to Mr. Edward Outlaw, who lives about one mile distant. On the surface of this clearing were a few scattered bits of flint and of inferior pottery. A small, barbed arrowhead of flint was picked up also.

The rich layer of sandy loam on the cleared ground was not much more than a foot in thickness. Of two burials found in this layer one had been badly disturbed and consisted of only a few scattered bones.

The other burial, an elongated layer of a single thickness of bones, contained parts of at least seven skeletons, as fragments of that number of skulls were found. These skulls had been placed together at one end of the layer.

Near the skulls was a small lump of red oxide of iron, the only object found with the interment.

SITE NEAR GEE LANDING, DREW COUNTY.

Not far from Gee Landing is a farm on which our agent saw considerable débris on the surface and thought it likely that it marked a former dwelling-site of the aborigines. The owner of the place, however, demanded a price for the investigation, which we were not willing to accord.

SITE NEAR LOWRIE LANDING, BRADLEY COUNTY.

Lowrie Landing has behind it a narrow strip of woods which is submerged in periods of high water. Back of this is a large field on elevated ground, forming part of the property of Messrs. Howard and David Webb who live somewhat farther back in the country. At several places in this field the ground was dark and had on the surface considerable midden débris, including bits of coarse pottery, broken arrowheads of flint, hammer-stones, etc.

In but one of these promising looking places, however, were burials met with, their presence being indicated by fragments of human bones on the surface. Considerable digging unearthed four burials, all badly disturbed and scattered, as hardly could have been otherwise, lying as they did but a few inches below the surface. No artifacts were associated with them.

Several low, irregular rises of the ground on the borders of the field were dug into without success, one being a shell-heap from which the following shells have been identified by Doctor Pilsbry: *Quadrula plicata*, *Q. nodifera*, *Q. trigona*,



FIG. 36. — Femur with union after fracture. Wherry Landing. (Full size.)

Q. metanever, *Q. tuberculata*, *Q. reflexa*, *Unio gibbosus*, *U. crassidens*, *Obovaria castanea*.

MOUND NEAR WHERRY LANDING, BRADLEY COUNTY.

In sight from Wherry Landing, in a cultivated field forming part of the plantation of Mr. J. M. Ferrell, of Johnsville, Ark., is a mound of irregular outline, probably averaging about 60 feet in diameter, though its original extent is difficult to determine, as the mound had been under cultivation and, it is said, had been surrounded by water in flood-times. An old colored man, owning an adjoining field, informed us that the mound had not been cultivated since 1877, when plowing over it was abandoned owing to the number of human bones brought to the surface. The mound, about 3 feet in height, is covered with a growth of pine trees, which somewhat interfered with complete investigation.

This mound, of sand with a slight admixture of clay, was fairly riddled with trial-holes by us, nearly all of which, except those in the outer parts, after reaching burials, were considerably extended.

No burial was found at a depth greater than 14 inches from its upper surface, though discolored sand in places in the mound went to a depth of 2 feet 8 inches before yellow, underlying sand was reached.

There had been considerable aboriginal disturbance in the mound owing to burials cutting through others. When but few scattered bones were encountered, presumably the result of such disturbance, they were not included in our list of burials.

An interesting feature in this mound was the placing by the aborigines of skeletons in a way that the heads were directed toward the south, so far as we could determine, the heads of all undisturbed burials being thus arranged.

We shall now detail each burial, the skeletons, when not otherwise described, having been of adults, at full length on the back. No bones were in a condition to save.

Burial No. 1, a disturbance probably caused by the placing of Burial No. 2. This burial (No. 1) had sustained in life a fracture of the thigh, which had united as shown in Fig. 36. This bone was presented by us to the United States Army Medical Museum, Washington, D. C.

Burial No. 2, heading SSE., had at the right side of the skull an undecorated pot with flaring rim.

Burial No. 3, with the skull directed SSE., had over the lower part of the left leg an undecorated vessel, somewhat broken, containing a mussel-shell.

Burial No. 4, the head pointing SSE., had at the right forearm what remained of parts of eight tools made from scapulæ of deer. These tools, all of the lower parts of which were missing through decay, each had a perforation made in the following way: the head of the scapula had been removed, a hole had been made down the neck of the scapula to communicate with another hole pierced through one side of the neck. With these fragmentary tools were two parts of the lower jaw of deer.

Near the pelvis of the skeleton, between the thighs, was a celt less than 2 inches long, probably smoothed down from a pebble.

Burial No. 5, head SE., had near the head a pot bearing, by way of decoration, rude impressions of a pointed tool.

Burial No. 6, head SE.

Burial No. 7, a disturbance.

Burial No. 8. This skeleton lay with the trunk extended on the back and had the right thigh and leg flexed toward the trunk at somewhat less than a



FIG. 37.—Pipe of sandstone. Wherry Landing. (Full size.)

right angle. The left extremity was missing, probably through the proximity of another grave. At the left humerus was a vessel with flaring rim, having indistinct trailed decoration.

Burial No. 9 had the skull directed nearly SSE.

Burial No. 10 lay with the head pointing SSE. At the outer side of the right elbow was an effigy-pipe of sandstone, shown in two positions in Figs. 37, 38

and in section in Fig. 39. This pipe, 4.75 inches in height, is coarsely made and has suffered superficial disintegration. It represents a human figure seated on its lower limbs, which extend under and inward diagonally. The figure, which faces the smoker, holds a biconical pipe. While in other respects this effigy-pipe is not of especial interest, the fact that it has an entire biconical pipe, that is to say not only the bowl but the portion made for the insertion of the stem, places it among a class that has few representatives. Almost invariably when



FIG. 38. Pipe of sandstone. Side view. (Full size.)

a human figure is represented holding any part of a pipe, it is the bowl alone, and the stem of the pipe has an orifice to receive it in the back of the figure, and not like the bowl, outside the figure. In fact the only other exception to this rule that we know of (though no doubt there are others) is the effigy-pipe of earthenware found by us last season in the mound at Gahagan, La., Red River, and shown in our "Some Aboriginal Sites on Red River,"¹ Figs. 13, 14, 15, 16, 17.

¹ Journ. Acad. Nat. Sci. of Phila., Vol. XIV.

Mr. McGuire's exhaustive work¹ shows no figure holding a biconical pipe.

Burial No. 11, a bunched burial, had with it a bottle, the body and the neck being a few inches apart, the proximal end of the neck turned from the body of the bottle, showing that the break had occurred before interment. On the body and neck of this bottle, in places, is decoration traced with a point in the rudest possible manner. Here and there in the lines are traces of red pigment.

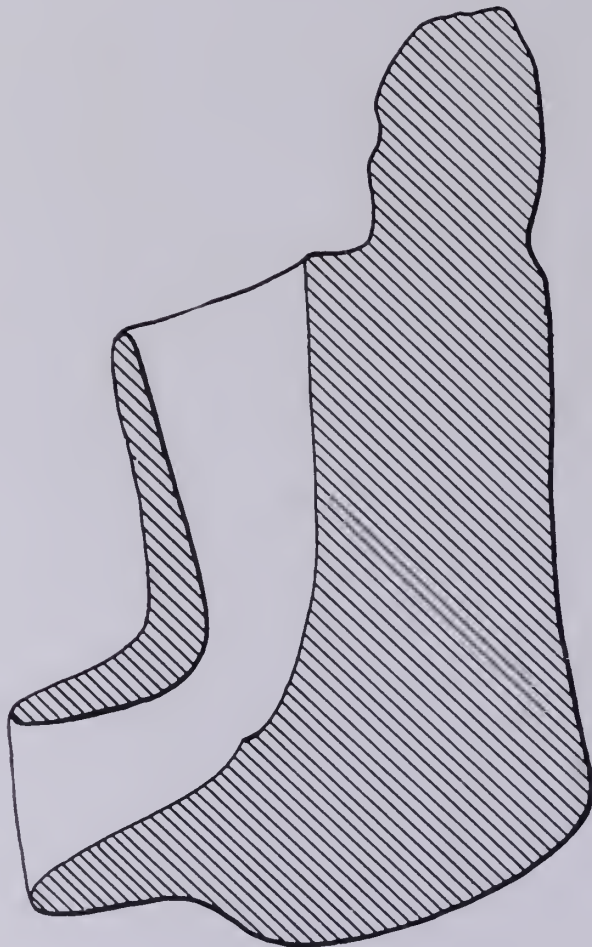


FIG. 39.—Pipe. Vertical section. (Full size.)

Burials Nos. 12 and 13 lay with the heads directed SSE.

Burial No. 14. This skeleton, heading SSE., is the one whose grave cut through Burial No. 7. On and at the side of this burial (Burial No. 14) bones had been piled, covering the skeleton closely from the skull to the pelvis, inclusive. Farther down, the bones continued, but were less closely placed. In this collection of disconnected remains were four skulls.

¹J. D. McGuire, "Pipes and Smoking Customs of the American Aborigines," Report of the U. S. National Museum, 1897.

With these bones was a rude arrowhead or knife, of flint; a slab of ferruginous sandstone; a spherical pebble about the size of a pigeon's egg; nine ulnæ of deer, with articular parts remaining. Three of these last were unfinished tools; three had rounded points; one, a sharp point; and two had the points absent through breakage.

Burial No. 15, another disturbance cut through by Burial No. 14. At the right of the skull lay a vessel, badly crushed by roots, upon which had been an incised design of some kind.

Burial No. 16 had the head directed S. At the right of the skull was an undecorated bowl, beside which was another bowl in small fragments, which had borne a rude, trailed design.

Burial No. 17. A small bunch with an undecorated pot in association.

Burial No. 18. A skeleton with the head directed S., having a small deposit of bones in connection with it.

Burial No. 19, with the head directed S. by E., had nearby a few scattered, human bones, perhaps a disturbance.

Burial No. 20 lay with the head S. by E. At the right side of the legs was a bunched burial, including four skulls. With this latter burial was an undecorated bowl crushed to fragments.

The ware of all the vessels from this mound is of inferior quality.

SITE NEAR WIRE FENCE LANDING, BRADLEY COUNTY.

About one-half mile southwestwardly from Wire Fence Landing is a property including two fields which until very recently belonged to the Bradley Lumber Company, of Warren, Ark., but of which Mr. William Harding, who lives about four miles distant, is now the owner.

The field nearer the river, fallow at the time of our visit, bore on the surface some evidence of former occupancy by the aborigines, including a number of arrowpoints of inferior make, the smaller ones among which are barbed.

Partly in the field and in part covered with small pine trees, probably a recent growth, was a low ridge of irregular shape and of undetermined extent, since one end of it seemed to merge with the level of surrounding woods. The highest part of this ridge probably was not more than one foot above the rest of the field.

The soil of which the ridge was composed was loamy sand which extended about 18 inches to undisturbed brown sand.

This ridge evidently had served as a place of burial to a considerable extent, as almost every trial-hole sunk by us came upon human remains, and often the discovery of one burial led to that of another, so that the finding of five or six interments resulted from a single hole.

The two burials which showed no disturbance lay at full length upon the back, but as none of the others encountered by us had been placed more than 6 inches into the underlying brown sand, there had been considerable disar-

rangement of these by contact with the plow. Some of the deeper graves had been disturbed by other graves in aboriginal times.

With the burials was no artifact of any kind, with the exception of eleven vessels of earthenware, some of which were badly broken. The ware from this place is of inferior quality, the shapes are commonplace (pots and bowls), and



FIG. 40.—Vessel of earthenware. Wire Fence Landing. (Diam. 8.1 inches.)

decoration, when present, as a rule is crude. One vessel from this place, more interesting than the rest, is shown in Fig. 40.

SITE NEAR BROOKS LANDING, BRADLEY COUNTY.

About one-half mile southeastwardly from Brooks Landing is a field forming part of a property belonging to Mr. Augustus Turner, who lives on another place a short distance from it. At the northeastern end of the field are two

mounds in sight one from another, one in the field, the other just beyond its limits, in the woods.

The mound in the field has been under cultivation and is greatly spread in consequence. Its height is about 4.5 feet; the diameter of its base, which is roughly circular, is about 90 feet. Trial-holes in this mound came upon compact, yellow clay. No burial or artifact of any kind was met with.

The mound in the woods, about 7.5 feet in height, is of irregular basal outline, its diameter being perhaps about 115 feet. Practically no sign of aboriginal occupancy was noticed in the field.

About one-quarter mile SW. from the field just described is another, a small one belonging to the same owner. In one part of this field was considerable midden débris; the soil was black and had a promising appearance. A human skull was said to have been plowed up at this place. Trial-holes, however, soon came upon underlying yellow clay and no burials were discovered.

SITE NEAR SUTTON FERRY, BRADLEY COUNTY.

Following the road about one-quarter mile in from Sutton Ferry, on property of Mr. B. H. Ozment, who lives at the ferry but on the side of the river opposite from the field, is cultivated land having in its vicinity a number of small, low, irregular mounds such as are so often found on aboriginal sites in Arkansas and in which burials seldom are discovered.

On the surface of the field was considerable midden débris, which included many arrowheads of flint, mostly rude, some being simply flakes given the outline of projectile points. No burials were found by us in this field, though a place of burial in it or near it most probably was there in the past.

At Sutton Ferry, said to be nine or ten miles by water from the railroad bridge near Warren, Ark., which is the end of navigation on Saline river, our investigation of that stream came to an end, the reports of our agents as to sites to the northward not being of a nature to warrant further search.

A Report on a Collection of Crania and Bones from Sorrel Bayou, Iberville Parish, Louisiana.

By DR. A. HRDLÍČKA.

Curator, Division of Physical Anthropology, U. S. National Museum.

The collection received in the spring of 1913 from Mr. Clarence B. Moore comprises 17 skulls and parts of one skeleton. Of this material, 16 skulls and a few bones come from a mound on Sorrel Bayou, Iberville Parish, Louisiana, while one skull is from a mound near Wherry Landing in Bradley Co., Arkansas. The latter specimen is a moderately brachycephalic cranium of an adult female, with just a trace of fronto-occipital deformation, and represents a type which was previously described in these reports by the writer and need not here be further considered.¹

The Sorrel Bayou material was found, according to Mr. Moore, with one exception, in deposits of skulls and bones where the specimens lay in complete confusion. The exception was one skeleton lying in a closely flexed position and on its left side. From this subject it was possible to save a few bones besides the skull.

The 16 crania include 8 males and 8 females, all adults, and ranging between approximately 35 and 60 years of age. They differ in color from pale dirty yellowish white, to obscure black-splotched brown. This is a somewhat remarkable variety of shade from one burial-place, but it can probably be explained by the assumption that the mound was a secondary place of interment and that before transfer the individual subjects lay in soil of different composition. All the specimens are of good consistency and present no fossilization, but also no traces of greenness.

None of the crania present any recent or large wounds, or any disease or pathological deformity. On the contrary they are uncommonly normal and well developed.

The skulls in particular show a good development in size, with strong facial parts and other features, giving the impression that they belonged to people of more than average stature and musculature.

Regrettably, all of the skulls are artificially deformed, presenting more or less marked fronto-occipital compression. This diminishes the value of their measurements and increases the difficulties of their correct anthropological classification. Fortunately, with three or four exceptions, the deformation is moderate enough to permit a visual appreciation of the true type of the specimens.

¹ See this Journal, XIII, 1908, pp. 558-563; XIV, 1909, pp. 173-240; and XIV, 1912, pp. 639-640.

On the whole, it is determinable that the series represents a fairly uniform single strain of people; that this strain was characterized by rather large lower jaws and broad upper dental arches; by a relative fullness of the face, the sub-orbital depressions being but little marked; by a quite pronounced though not extreme prognathism; by large, though at the same time high nasal aperture; and by good sized, megaseme orbits. The supraorbital ridges while strongly developed in the males are not especially heavy, and the forehead, though



FIG. 1a.—The lowest dorsal and upper three lumbar vertebrae of skeleton No. 277,730, U. S. N. M., showing diseased condition and bend forward. Front view.

sloping slightly more backward than in whites, would have shown evidently in no case a decided natural slant.

The vault is as a rule of a very fair height; its outline, seen from above, approaches the ovoid or the elliptical. The cephalic index ranged through mesocephaly, with a few of the forms possibly slightly shorter. The skulls resemble in this and other respects quite closely the crania excavated by Mr. Clarence B. Moore on a former occasion at Johnson Place, Avoyelles Parish, La. (though those were not deformed), and also a certain proportion of the crania collected by Mr. Moore and others in southern Arkansas. They are remarkably like the less narrow type of crania among the Siouan people and the more southern

Iroquois. To the southwestward, they are related to the few undeformed crania that we now know from the Port Arthur region and from Galveston.

The above suggestions are about all that can at present be ventured with some safety. The anthropologist works under great difficulties in these regions, on one hand on account of the head deformations, and on the other because of lack of well-identified comparative material from such tribes as the Choctaw and their neighbors on one side, the Chitimacha and Atakapa on the other and the



FIG. 1b.—The lowest dorsal and upper three lumbar vertebrae of skeleton No. 277,730, U. S. N. M., showing diseased condition and bend forward. Side view.

Natchez people to the north. However, if collections such as those of Mr. Moore continue to be made we shall a few years hence be in a position to give a more definite account of the nature of the remains from these territories than is now possible.

Special Remarks: With the exception of a few insignificant impressions due to old knocks, occasional traces of arthritis in the glenoid fossa and on the

condyloid process of the lower jaw, and three instances of exostoses in the distal part of the auditory meatus,¹ the 16 crania show nothing pathological. Even the teeth, though in some cases showing advanced wear, are uncommonly healthy, out of the 401 teeth present only six (in five skulls) presenting slight to moderate caries.² In three or four instances there evidently existed, however, some pyorrhoea.

As to anomalies, there are none worthy of special mention; two of the male skulls are however very heavy, one with its lower jaw reaching the weight of fully three pounds. Two of the lower jaws, though otherwise normal, are of extraordinary size even for the Indian.

Opposed to the very healthy state of the skulls, the bones of the skeleton of No. 277,730 show considerable disease. They present what is either tuberculosis or a very pronounced form of arthritis, of the lowest dorsal and especially the upper lumbar vertebræ—with moderate curvature forward of the spine at this place (Figs. 1a, 2a); an abscess cavity in the distal end of the left clavicle; more or less marked traces of periostitis on all of the long bones as well as both of the clavicles; and signs of arthritis on one of the condyles of the right femur, as well as the lower articular surface of the right (the left absent) humerus. These bones represent one of the two skeletons in the mound whose parts were found in association and may belong to an intrusive, later burial.

¹ In two males quite marked bilateral, in one male slight unilateral.

² Of those absent all but 15 were lost post-mortem; and 13 of these 15 were lost in life by one of the women.

ABSTRACT OF MEASUREMENTS.

Crania.	Males.			Females.		
	Average, cm.	Mini- mum, cm.	Maxi- mum, cm.	Average, cm.	Mini- mum, cm.	Maxi- mum, cm.
Cranial capacity (author's method).....	1584 c.c.	1430 c.c.	1740 c.c.	1338 c.c.	1230 c.c.	1445 c.c.
Mean cranial diameter (cranial module) (length + breadth + basion-bg. height) 3.....	16.20	15.30	16.47	14.92	14.43	15.40
Thickness of skull (along and 1 cm. above squamous sut.).....	6 mm.	4-7	6-8	6 mm.	4-6	6-8
(a) Total height of face (menton-nasion).....	13.2	11.8	14.2	11.3	10.9	11.7
(b) Upper height of face (alveolar point-nasion).	7.9	7.2	8.5	7.1	6.3	7.9
(c) Diameter bizygomatic max.....	14.9	13.5	15.4	13.4	12.9	14.3
Facial index, total ($\frac{a \times 100}{c}$).....	88.5			85.5		
Facial index, upper ($\frac{b \times 100}{c}$).....	53.2			52.6		
Index of facial prognathism (angle between lines basion-alveolar point and alveolar point- nasion).....	71°			71.5°		
Index of alveolar prognathism (angle between lines basion-alveolar point and alveolar point- subnasal point).....	56°			55°		
Orbits: Mean height.....	3.66	3.5	3.85	3.57	3.25	3.8
Mean breadth.....	4.07	3.8	4.35	3.84	3.55	4.05
Mean index.....	90.			93.		
Nasal aperture: Height.....	5.6	5.15	5.85	5.1	4.5	5.6
Breadth.....	2.8	2.55	3.3	2.6	2.1	2.9
Index.....	50.4			50.4		
Lower jaw: Height of symphysis.....	4.	3.5	4.4	3.2	2.9	3.4
Thickness at 2d molar.....	1.75	1.55	2.	1.6	1.35	1.8
Diameter bigonial.....	11.	9.7	12.2	10.1	9.6	10.5
Angle.....	114°	104°	125°	122°	116°	129°
Circumference, greatest horizontal.....	51.6	49.3	53.2	48.7	47.0	50.3
Sagittal arc (nasion-opisthion).....	36.9	35.5	38.1	35.	34.1	36.3
Nasion-bregma segment.....	12.8			12.		
Bregma-lambda segment.....	12.1			12.		
Lambda-opisthion segment.....	12.0			11.		

INDEX.

- Absence of artifacts with burials, 10, 11, 15, 30, 34, 38, 40, 45, 46, 60, 79, 83, 85
Absence of sherds from Poverty Point, . . . 70
Advance search for mounds, . . . 7
Alabama Bayou, mound on, . . . 18
Alphenia Plantation, mounds on, . . . 35
Arrowhead of unusual shape, . . . 76
Arrowheads, distribution of types, . . . 57, 70
Arrowheads, or spear heads, 12, 16, 19, 25, 31, 32, 38, 43, 44, 46, 51, 56, 57, 59, 61, 66, 69, 70, 76, 77, 78, 79, 81, 83, 85, 91, 93
Arrowheads with single shoulder or barb, . . . 25, 70
Astragalus of deer, with burial, . . . 38
Atchafalaya river, its course, . . . 9

Bayou D'Arbonne, . . . 76
Bayou Grosse Tête, mounds on, . . . 17
Bayou La Rose, mounds on, . . . 17
Bayou Maçon, . . . 42
Bayou Teche, . . . 19
Bead, discoidal, of shell, . . . 32
Bead of granite, . . . 17
Bead of jasper, of unusual size, . . . 72
Bead of red jasper, . . . 66, 70
Bicave ear-plug of earthenware, . . . 23
Bicave stones, . . . 22, 25, 44, 78
Bone implements, . . . 15, 87, 91
Bones, pathological, sent to Army Medical Museum, . . . 13, 87
Bonnet Bayou, mounds on, . . . 12
Bottle-form, rare in region, . . . 48, 52, 81, 90
Brannin Place, mound on, . . . 46
Brooks Landing, site near, . . . 92
Bunched burials, paucity of artifacts with, discussed, . . . 30
Burial customs discussed, . . . 14, 22, 30, 40
Burial of incomplete skeletons, . . . 11, 15, 50, 54
Burials uniformly with head to south, . . . 87

Canebrake mounds, . . . 49
Celts, . . . 13, 24, 38, 54, 58, 59, 69, 70, 83, 84, 88
Ceremonial killing of vessels, 22, 23, 24, 25, 26, 27, 28, 30, 31, 32
Ceremonial lancehead of sandstone, . . . 26
Chalcedony, charm-stone of, . . . 76
Charm-stone made from a pebble, . . . 32
Charm-stone of chalcedony, . . . 76
Chitimacha, reburial practised by, . . . 14, 30
Clay objects hitherto undescribed, 12, 15, 16, 43, 61, 70, 72, 73, 74
Crania, few, found in condition to preserve, . . . 9
Cross Bayou Landing, mounds near, . . . 18
Cross, mounds forming, . . . 37
Crowroot Place, mound on, . . . 63
Culin, Stewart, as to clay objects hitherto undescribed, . . . 74
Cut-off Landing, mounds near, . . . 45

Dean Lake, mound on, . . . 44
Decoration, incised, on pottery, 13, 16, 24, 25, 30, 40, 48, 51, 63, 66, 81, 83, 84, 90, 91
Decoration, incised, with red pigment filling, . . . 90
Decoration, polychrome, on pottery, . . . 52
Decoration of trailed lines, on pottery, 38, 83, 88, 91
Decoration, red pigment, on pottery, . . . 15, 81
Decoration, stamped, on pottery, . . . 11, 13, 15
Deer, jaw-bone of, fragmentary, with burial, . . . 87
Deer, scapulae of, tools made from, . . . 87
Deer, ulnae of, tools made from, . . . 91
Deposits of bones, great, . . . 14, 22
Discoidal bead of shell, . . . 32
Disk, pitted, of ferruginous sandstone, . . . 42
Drill of flint, . . . 44
Dwelling-sites underlying burials, 24, 40, 41, 51, 59

Ear-plug of earthenware, . . . 23
Ear-plugs of claystone, . . . 46
Earthenware effigy-pipe, . . . 22
Earthenware figurine, . . . 72
Earthenware objects of new type, 12, 15, 16, 43, 61, 70, 72, 73, 74
Earthenware supports for vessels, . . . 60
Effigy-pipe of earthenware, . . . 22
Effigy-pipe of limestone, . . . 66
Effigy-pipe of sandstone, . . . 88
Effigy-vessel of earthenware, . . . 32

Figurine of earthenware, . . . 72
Flint implements from Poverty Point, . . . 70
Flynn Place, mound on, . . . 35
Fool river, mound at, . . . 39

Galena, . . . 59
Gee Landing, site near, . . . 85
Glenk, Robert, B.S., Ph.C., . . . 72
Godfrey's Landing, site near, . . . 83
Goulett Island, site on, . . . 81
Grand Lake, mounds on, . . . 19
Granite, bead of, . . . 17
Gravel, so-called, . . . 70, 73
Gravel tempering of pottery, . . . 24

Hampton Landing, site at, . . . 85
Hand-game, objects probably used in, . . . 73, 74
Hatchets of stone, . . . 32
Hedgeland Place, mounds on, . . . 38
Hematite, balls of, . . . 72
Hematite, deposits of, for pigment, . . . 22, 24
Hematite "plummets," . . . 66, 70, 72, 74, 76
Hickbottom Place, mounds on, . . . 45
Hodge, F. W., . . . 9
Holmes, Prof. W. H., as to clay pellets used in slings, . . . 74
Holmes, Prof. W. H., as to westernmost occurrence of stamped decoration on pottery, . . . 11

- Hones, 38, 54
 Hopeka Plantation, 43
 Hope Landing, mounds near, 58
 Hrdlička, Dr. Aleš, 9, 14, 95
 Hrdlička, Dr. Aleš, report on crania and bones
 from Sorrel Bayou, 94
 Indian Bayou, mounds near, 40
 Indian Village Place, mound on, 34
 Insley Place, mounds on, 60
 Introduction, 7
 Jackson Place, mounds on, 64
 Jasper bead of unusual size, 72
 Jasper, red, bead of, 66, 70
 Johnson Landing, site near, 78
 Kaolin (white pigment), 22
 Keeley, F. J., 9
 Keller, Dr. H. F., 9, 16
 "Killing," ceremonial, of vessels, 22, 23, 24, 25, 26,
 27, 28, 30, 31, 32
 Knife of chert, 15, 83
 Knife of flint, 24, 57, 83
 Knives, 15, 24, 25, 46, 57, 69, 70, 81, 83, 91
 Lake La Rose, mounds on, 16
 Lake Larto, 21
 Lake Place, mounds on, 61
 Lake Verret, mounds on, 10
 Lancehead, ceremonial, of sandstone, 26
 Lee Place, mounds on, 39
 Little Pigeon Bayou, 13
 Lockett, Prof. Samuel H., as to sites on Poverty
 Point and the Motley Place, 66, 69, 70
 Loreauville, mounds at, 21
 Lower Jackson Landing, mound near, 63
 Lowrie Landing, site near, 85
 Lucas, Prof. F. A., 9, 14
 Map of Atchafalaya river, 8
 Map of Bayou D'Arbonne, 77
 Map of Bayou Maçon, 33
 Map of Lake Larto, 20
 Map of part of Saline river, 80
 Map of region investigated, 6
 Map of Tensas river, 33
 Mayes, Miss Josie S., 21
 Mayes mounds, 21
 Melville, mounds near, 18
 Middenheap composition of mounds, 11, 12, 14, 15
 Miller, Dr. M. G., 9, 67
 Miller Place, mound on, 10
 Montgomery Place, mounds on, 58
 Moro Plantation, 19
 Mortuary perforation of bases of vessels, 22, 24, 25,
 26, 27, 28, 30, 31, 32
 Moore's Mill, site near, 83
 Motley Place, site on, 66
 Mott Place, mounds on, 54
 Mound Bayou Place, mound on, 39
 Mound, great, on Poverty Point, 67
 Mound, great, on the Motley Place, 75
 Mound Place, 61
 McGuire, Joseph D., his exhaustive work on
 pipes, 90
 Objects of clay, hitherto undescribed, 12, 15, 16, 43,
 61, 70, 72, 73, 74
 Ochre, yellow, 22, 25, 27
 Orientation of mounds, 34, 36, 41, 46, 55, 58, 61,
 62, 64, 78
 Otter, penis-bone of, 14
 Ouchley Place, site on, 77
 Oxide, red, of iron, 85
 Pathological specimens, 13, 87
 Pebble, faceted, 42
 Pebbles, from rattles, 24, 81
 Pebbles, pottery polishers, 30
 Penis-bone of Otter, 14
 Perforation, mortuary, of bases of vessels, 22, 24, 25,
 26, 27, 28, 30, 31, 32
 Pigeon Bayou, mound opposite, 16
 Pigment, 22, 24, 25, 27, 85
 Pigment coating on pottery, 15, 63, 38
 Pigment, red, filling in line decoration, 90
 Pilsbry, Dr. H. A., 9, 85
 Pipe, effigy-, of earthenware, 22
 Pipe, effigy-, of limestone, 66
 Pipe, effigy-, of sandstone, 88
 Pipe, "monitor," 51
 Pipe of limestone, 51
 Pipe of sandstone, large, decorated, 26
 Pipes, 22, 24, 25, 26, 29, 32, 46, 51, 66, 88
 Pipes, bi-conical, 26, 29, 32, 46, 51, 89
 Pipes of earthenware, 22, 24, 25, 26, 29, 32, 46, 51
 Pit burial, 14, 22, 23, 24, 25, 26, 27, 28
 Plan of great mound on Poverty Point, 68
 Plan of mounds on Alphenia Plantation, 36
 Plan of mounds on Jackson Place, 65
 "Plumets" of hematite, 66, 70, 72, 74, 76
 Polishing of pottery, 30
 Polychrome decoration on pottery, 52
 Pottery, characteristics of, discussed, 48, 81
 Pottery seemingly not used at Poverty Point, 70
 Pottery stamp-decorated, 11, 13, 15
 Poverty Point, site on, 66
 Purple pigment, 24
 Raybon, Capt. J. S., 7, 9, 10, 21
 Reburial, 14, 23, 30
 Red paint on sherds, 15, 16, 21, 38, 40, 63, 84
 Report by Doctor Hrdlička, on crania from
 Sorrel Bayou, La., 95
 Reworking of arrowpoint, 70
 Richardson Place, mounds on, 63
 Ruggs Bluff, site near, 78
 Saline river, 79
 Sandstone, ferruginous, slab of, 91
 Sandstone, ferruginous, pitted disk of, 42
 Schwing Place, mound near, 15
 Scott Place, site on, 78
 "Shell banks," 12, 19
 Shell bead, discoidal, 32
 Sorrel Bayou, mound on, 13
 Stamped decoration on pottery, 11, 13, 15
 Stevens Place, mounds on, 60
 Supports for vessels, earthenware, 60
 Sutton Ferry, site near, 93
 Swanton, Dr. John R., quoted, 14

Tempering of pottery,	24, 48	Weir, S. G.,	9
Temple-site, mound probably a,	75	Wherry Landing, mound near,	87
Tensas river,	32	Wilbert Property, mounds on,	17
Territory investigated,	7	Wilbert's Sons, Messrs. A.,	13, 15
Tools made from deer scapulae,	87	Wildwood Landing, mound near,	34
Tubular bead of granite,	17	Wiley Place,	31
Tubular beads of jasper,	66, 70, 72	Willoughby, Charles C., as to objects of clay, hitherto undescribed,	73, 74
Turkey Bluff, site near,	78	Wire Fence Landing, site near,	91
Turkey Point, mounds near,	46		
Wardle, H. Newell,	9		

PUBLICATIONS OF The Academy of Natural Sciences of Philadelphia.

Fifteen volumes of the New Series of the JOURNAL (Quarto) and Volume XVI, Part I, have been issued—1847 to 1913. The price per volume of four parts is \$10, or \$3 per part to subscribers, and to others \$12.50 per volume, or \$3.75 per part. Vol. VII contains "The Extinct Mammalian Fauna of Dakota and Nebraska, with a Synopsis of the Mammalian Remains of North America." Illustrated with thirty plates. By JOSEPH LEIDY, M.D., LL.D.

Volume XV, New Series, has been published complete, in commemoration of the Centenary of the Academy, on specially prepared paper, 756 pages and 59 plates, 6 of which are colored.

The FIRST SERIES OF THE JOURNAL, 1817 to 1842, in eight volumes octavo, may be obtained at \$40 to members and to the public \$48.

The FIRST SERIES OF THE PROCEEDINGS of the Academy, octavo, 1841 to 1856, of which eight volumes were completed December 31, 1856, may be obtained at \$24 to members, and to the public \$36.

The SECOND SERIES OF THE PROCEEDINGS, commencing January 1, 1857 (of which fourteen volumes were completed December 31, 1870) may be obtained at \$42 to members, or \$3 per volume separately, and to the public \$3.75 per volume.

The THIRD SERIES OF THE PROCEEDINGS, illustrated, commencing January 1, 1871 (of which forty-two volumes are now completed), is published at \$5 per annum to subscribers, payable in advance; single volumes, \$6.25.

AN INDEX TO THE SCIENTIFIC CONTENTS OF THE JOURNAL and PROCEEDINGS of the Academy, 1817-1910, 1433 pages, octavo, carriage prepaid, \$3.50.

AMERICAN JOURNAL OF CONCHOLOGY, 1865-71. Seven vols., 8vo. Containing 2500 pages, illustrated by 150 plates, many of them colored, besides about 1000 wood engravings. Published at \$70. Price reduced to \$40 for the set. Separate volumes of surplus (Vols. IV to VII only), \$1 each.

BOOKS FOR SALE.

The ACADEMY has the following works for sale at the prices affixed:

MANUAL OF CONCHOLOGY. By GEO. W. TRYON, JR., continued by HENRY A. PILSBRY. A complete, fully illustrated monograph of recent mollusks. Series I, Cephalopoda, Scaphopoda, Amphineura and Marine Gastropoda; 17 volumes (finished). Series II, Terrestrial Mollusks, 21 volumes published. Plain edition, per part, \$3; per volume, \$12. Colored edition, per part, \$5; per volume, \$20. Fine edition, heavy plate paper, plates in duplicate, colored and India tinted, per part, \$8; per volume, \$32.

DESCRIPTION OF SHELLS OF NORTH AMERICA, with 68 colored plates. By THOMAS SAY. 1830-34. \$10.50.

MONOGRAPH OF THE TERRESTRIAL MOLLUSCA OF THE UNITED STATES. With illustrations of all the species. By GEO. W. TRYON, JR. Plain edition, \$8.50.

MONOGRAPH OF THE FRESH-WATER UNIVALVE MOLLUSCA OF THE UNITED STATES. By S. S. HALDEMAN, 1840-44. Continuation to 1871, by GEO. W. TRYON, JR. Many colored plates. Prices for the continuation: Fine edition, duplicate plates, \$14; with colored plates, \$8; with plain plates, \$6.

SYNONYMY OF THE SPECIES OF STREPOMATIDE (Mclanians) OF THE UNITED STATES. By GEO. W. TRYON, JR. Cloth, \$1; paper, 50 cents.

LIST OF AMERICAN WRITERS ON RECENT CONCHOLOGY, with the Titles of the Memoirs and Dates of Publication. By GEO. W. TRYON, JR. Cloth, \$1; paper, 50 cents.

MONOGRAPH OF THE ORDER PHOLADACEA and other Papers. By GEO. W. TRYON, JR. Cloth, \$1; paper, 50 cents. COMPLETE WRITINGS ON RECENT AND FOSSIL CONCHOLOGY OF C. S. RAFINESQUE. Edited by WM. G. BINNEY and GEO. W. TRYON, JR. \$1.

OBSERVATIONS ON THE GENUS UNIO. By ISAAC LEA, LL.D. 4to. Vols. 1 to 13. With Index, Nos. 1, 2 and 3, complete. Several hundred fine lithographic plates, \$60. Same, Vols. 2 to 13, inclusive, except Vol. 4 Each volume separately, \$5.

SYNOPSIS OF THE GENUS UNIO. By ISAAC LEA, LL.D. Fourth edition. \$5.

CONTRIBUTIONS TO GEOLOGY. By ISAAC LEA. \$3.

FOSSIL FOOT-MARKS. By ISAAC LEA. Large folio, text and plate. \$2. Plate alone, 50 cents.

CATALOGUE OF TYPES OF CRETACEOUS INVERTEBRATE FOSSILS IN THE COLLECTION OF THE ACADEMY. By C. W. JOHNSON. Paper, 50 cents.

NOTICE TO BOOKSELLERS—All the publications of the Academy will be supplied to booksellers at a discount of 20 per cent. on the prices charged to the public.

Apply to EDWARD J. NOLAN, M.D., at the Hall of the Academy, Logan Square.

August, 1913.

CONTENTS

* MOORE, CLARENCE B. Some Aboriginal Sites in Louisiana and in Arkansas. (Atchafalaya River, Lake Larto, Luisas River, Bayou Maçon, Bayou D'Arbonne, in Louisiana; Saline River, in Arkansas.)	5
† HRDLIČKA, A. A Report on a Collection of Crania and Bones from Sorrel Bayou, Iberville Parish, Louisiana	95

* Extra Copies printed for the author September 6, 1913.

† Extra copies printed for the author September 6, 1913.